This SSP is hard-coded in the boilerplate

SPECIAL PROVISIONS

SECTION 1 (BLANK)

USE WITH 2006 STANDARDS.
The use of this SSP is under a 2 year FHWA pilot program to be monitored by the Division of Construction.
Use in projects $5 million or more and with 200 or more working days and in all highway planting projects. Do not use cost plus time bidding on Highway Planting Projects.
Do not use this SSP in maintenance or building projects.
Obtain concurrence from District/Region Construction Deputy Director/Chief if:

1. **Omitting the SSP in projects meeting use criteria.**
2. **Using the SSP in projects not meeting use criteria.**
3. **Changing the 55-day period.**
4. **Adding or deleting submittals to Paras 3 and 4, except as per the instructions.**

For highway planting projects, delete submittals in Paras 3 and 4 not applicable to the project. Concurrence from the District/Region Construction Deputy Director/Chief is not required.
If the project does not meet the above criteria but needs a delayed start to procure materials for an item as a first order of work, use this SSP. Concurrence from the District/Region Construction Deputy Director/Chief is not required.

SECTION 4. BEGINNING OF WORK, TIME OF COMPLETION, AND LIQUIDATED DAMAGES

1. If a delayed start different from 55 days is needed, edit "55th" to the number you need.

The 1st working day is the 55th day after contract approval.

2*. Insert either "Contractor Supplied Biologist" if SSP 07-321 is used, or "Designated Biologist" if SSPs 07-325 or 07-327 is used, otherwise delete this paragraph.

Do not start work at the job site until the Engineer approves your submittal for the _____.

3*. Renumber list as appropriate.

Do not start work at the job site, except for measuring controlling field dimensions and locating utilities, until the Engineer approves your submittal for:

1. Baseline Progress Schedule (Critical Path Method)
   Use if SSP 07-340 is in the project.
2. Water Pollution Control Program (WPCP)
   Use if SSP 07-345 is in the project.
2. Storm Water Pollution Prevention Plan (SWPPP)
3. Notification of Dispute Resolution Advisor (DRA) or Dispute Review Board (DRB) nominee and disclosure statement as specified in Section 5-1.15, "Dispute Resolution," of the Standard Specifications

4. Renumber list as appropriate.

In addition to the above submittals, do not start work at the job site, except for measuring controlling field dimensions and locating utilities, until you submit:

1. Notice of Materials To Be Used.

Use if SSP 12-220 is in the project.

2. Contingency plan for reopening closures to public traffic.

Use if the first order of work requires Contractor-furnished signs.

3. Written statement from the vendor that the order for the sign panels has been received and accepted by the vendor. The statement must show the dates that the materials will be shipped.

Use if the first order of work requires electrical material.

4. Written statement from the vendor that the order for electrical material has been received and accepted by the vendor. The statement must show the dates that the materials will be shipped.

Use if the first order of work requires structural steel or other material with long lead time. Edit for the type of material needed. If needed, add "working drawings" for the material as a submittal to Para 3.

5. Written statement from the vendor that the order for structural steel has been received and accepted by the vendor. The statement must show the dates that the materials will be shipped.

5. Edit to be consistent with Para 1.

You may start work at the job site before the 55th day after contract approval if:

1. You obtain required approval for each submittal before the 55th day
2. The Engineer authorizes it in writing

6

The Department grants a time extension if a delay is beyond your control and prevents you from starting work at the job site on the 1st working day.

7*. Use if project is not a cost plus time bidding type and has no PEW. Enter the number of highway construction working days. Delete Paras 8 through 14.

Complete the work within _____ working days.

Paras 8 and 9. Use if project has PEW and is not a cost plus time bidding type. Delete Paras 7 and 10 through 14.

8*. Enter the number of highway construction working days.

Complete the work, except plant establishment work, within _____ working days.

9*. Enter the total number of working days. Add highway construction working days and working days for PEW.

Complete the work, including plant establishment work, within _____ working days.

Paras 10 and 11. Use if project is a cost plus time bidding type and has no PEW. Delete Paras 7 through 9 and 12 through 14.

10

Complete the work within the number of working days bid.

11*. Enter the RUC and highway route number the RUC was based on.

Additional damages to those specified in Section 8-1.07, "Liquidated damages," of the Standard Specifications are $_____ per day starting on the 1st day after exceeding the number of working days bid until work requiring lane or shoulder closures on State Highway Route _____ is complete.

Paras 12 through 14. Use if project is a cost plus time bidding type and has PEW. Delete Para 7 through 11.

12

Complete the work, except plant establishment work, within of the number of working days bid.

13*. Enter the RUC and highway route number the RUC was based on.

Additional damages to those specified in Section 8-1.07, "Liquidated damages," of the Standard Specifications are $_____ per day starting on the 1st day after exceeding the number of working days bid until work requiring lane or shoulder closures on State Highway Route _____ is complete.

14*. Enter the number of working days for PEW.

Complete the plant establishment work within _____ working days starting on the 1st working day after exceeding the number of working days bid.

USE WITH 2006 STANDARDS.
Use when requested in writing by a local government entity.

5-1.__ RESPONSIBILITY TO OTHER ENTITIES

The Contractor shall be responsible for any liability imposed by law and for injuries to or death of any person including, but not limited to, workers and the public or damage to property, and shall indemnify and save harmless any county, city or district, its officers and employees connected with the work, within the limits of which county, city or district the work is being performed, all in the same manner and to the same extent conforming to the provisions in Section 7-1.12, "Indemnification and Insurance," of the Standard Specifications, for the protection of the State of California and all officers and employees thereof connected with the work.

USE WITH 2006 STANDARDS.
Use when the District has determined that yard areas or plant sites are available for the project.
Refer to Highway Design Manual, Topic 112, "Contractor's Yard and Plant Sites," regarding guidelines to be used by the District in establishing Contractor's yard areas and plant sites.

5-1.__ AREAS FOR CONTRACTOR'S USE

Attention is directed to the provisions in Section 7-1.19, "Rights in Land and Improvements," of the Standard Specifications and these special provisions.

2. When yard areas or plant sites are not available for exclusive use by the Contractor, use Paras 2, 3, and 4, as applicable, and delete remaining Paras.

The highway right of way shall be used only for purposes that are necessary to perform the required work. The Contractor shall not occupy the right of way, or allow others to occupy the right of way, for purposes which are not necessary to perform the required work.

3. When areas are available for exclusive use by the Contractor for yard areas and plant sites, delete Paras 3 and 4.

No State-owned parcels adjacent to the right of way are available for the exclusive use of the Contractor within the contract limits. The Contractor shall secure, at the Contractor's own expense, areas required for plant sites, storage of equipment or materials, or for other purposes.

4

No area is available within the contract limits for the exclusive use of the Contractor. However, temporary storage of equipment and materials on State property may be arranged with the Engineer, subject to the prior demands of State maintenance forces and to other contract requirements. Use of the Contractor's work areas and other State-owned property shall be at the Contractor's own risk, and the State shall not be held liable for damage to or loss of materials or equipment located within such areas.

5

Areas available for the exclusive use of the Contractor are designated on the plans. Use of the Contractor's work areas and other State-owned property shall be at the Contractor's own risk, and the State shall not be held liable for damage to or loss of materials or equipment located within these areas.

6*. Include address and room number for District Permit Engineer.

The Contractor shall obtain encroachment permits prior to occupying State-owned parcels outside the contract limits. The required encroachment permits may be obtained from the Department of Transportation, Permit Engineer, _____.

7

Residence trailers will not be allowed within the highway right of way, except that one trailer will be allowed for yard security purposes.

8

The Contractor shall remove equipment, materials, and rubbish from the work areas and other State--owned property which the Contractor occupies. The Contractor shall leave the areas

in a presentable condition in conformance with the provisions in Section 4-1.02, "Final Cleaning Up," of the Standard Specifications.

9

The Contractor shall secure, at the Contractor's own expense, areas required for plant sites, storage of equipment or materials or for other purposes, if sufficient area is not available to the Contractor within the contract limits, or at the sites designated on the plans outside the contract limits.

USE WITH 2006 STANDARDS.
Use in ALL projects.

5-1.__ PAYMENTS

1. Use when Para 2 is not used.

No partial payment will be made for any materials on hand which are furnished but not incorporated in the work.

2.* Use if:
1. Project has 90 or more working days excluding plant establishment.
2. Engineer's estimate exceeds minor B threshold and there are materials that qualify for partial pay.

If the above project criteria are met, allow partial payments for materials following these general rules:

If the engineer's estimate is less than $1,000,000, each item or group you list must have a material value of $1000 or more.

If the engineer's estimate is greater than $1,000,000, each item or group you list must have a material value of $5000 or more.

In determining the partial payments to be made to the Contractor, only the following listed materials will be considered for inclusion in the payment as materials furnished but not incorporated in the work:

A. _____
B. _____
C. _____

USE WITH 2006 STANDARDS.
Use if supplemental project information (SPI) is available.
List available SPI. Insert location in 4th row:
For District 05 project use this location and telephone no.: 1150 Laurel Lane, Suite 175, San Luis Obispo, CA 93401; (805) 549-3116.
For District 06 project use this location and telephone no.: 855 M Street, Suite 200, Fresno, CA 93721; (559) 445-6360.
For District 10 project use this location and telephone no.: 611 San Juan Avenue, Stockton, CA 95203; (209) 948-7849.
Add or delete rows to suit project.
For guidance on SPI in the Information Handout, go to the RTL Guide. Examples: agreements, biological opinions, permits
Example SPI at the District Office: cross sections or SPI that cannot be made into an electronic copy.
Example SPI at the Transportation Laboratory: rock cores

5-1.__ SUPPLEMENTAL PROJECT INFORMATION

The Department makes the following supplemental project information available:

Supplemental Project Information

Means	Description
Included in the Information Handout	
Available for inspection at the District Office	
Available for inspection at the Transportation Laboratory	
Available for inspection at _____; telephone (___) - ___	
Available as specified in the Standard Specifications	Bridge as-built drawings
Available at: http://www.dot.ca.gov/hq/esc/oe/weekly_ads/index.php	Cross sections

USE WITH 2006 STANDARDS.
Use when a majority of the work is away from public traffic, for example, on new alignments, and not all the requirements of the Vehicle Code apply.
NOTE: Section 591 of the Vehicle Code exempts vehicles used by the Contractor within the limits of the contract from the requirements in Divisions 11, 12, 13, 14 and 15 of the Code. This enables the Contractor to use off-highway construction equipment. This SSP makes those provisions of the Code we believe to be necessary for the protection of public traffic apply to the Contractor's vehicles in those areas where public traffic passes through the work area. Both Section 591 of the Vehicle Code and Section 7-1.01D of the Standard Specifications require the Contractor to protect public traffic from injury or damage from such off-highway equipment.
The first Para of Section 7-1.01D of the Standard Specifications requires that all the requirements in Divisions 11, 12, 13, 14, and 15 of the Vehicle Code apply, as the project limits generally include extensive areas of the traveled way open to public traffic but not included in the work zone, and we do not want "off-highway" equipment operating in these areas.

5-1.__ HIGHWAY CONSTRUCTION EQUIPMENT

The first paragraph of Section 7-1.01D, "Vehicle Code," of the Standard Specifications shall not apply.

2

Pursuant to the authority contained in Section 591 of the Vehicle Code, the Department has determined that, within such areas as are within the limits of the project and are open to public traffic, the following requirements of the Vehicle Code will apply: the lighting requirements in Section 25803; the brake requirements in Chapter 3, Division 12; the splash apron requirements in Section 27600; and, when operated on completed or existing treated base, surfacing, pavement or structures, except as otherwise provided in Section 7-1.02, "Load Limitations," of the Standard Specifications, the weight limitation requirements contained in Division 15.

USE WITH 2006 STANDARDS.
Use on projects where appearance of the work would have an unusual effect on public opinion. Use of this SSP MUST be justified in PS&E submittal.

5-1.__ PROJECT APPEARANCE

The Contractor shall maintain a neat appearance to the work.

2

In areas visible to the public, the following shall apply:

A. When practicable, broken concrete and debris developed during clearing and grubbing shall be disposed of concurrently with its removal. If stockpiling is necessary, the material shall be removed or disposed of weekly.
B. Trash bins shall be furnished for debris from structure construction. Debris shall be placed in trash bins daily. Forms or falsework that are to be re-used shall be stacked neatly concurrently with their removal. Forms and falsework that are not to be re-used shall be disposed of concurrently with their removal.

3

Full compensation for conforming to the provisions in this section, not otherwise provided for, shall be considered as included in prices paid for the various contract items of work involved and no additional compensation will be allowed therefor.

USE WITH 2006 STANDARDS.
Use with SSP 07-340 or 07-345, "Water Pollution Control."
Edit to include reference to any additional RWQCB permits.
1*. Insert name of RWQCB in whose jurisdiction the project lies.

5-1.__ RELATIONS WITH CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD

This project lies within the boundaries of the _____ Regional Water Quality Control Board (RWQCB).

Use Paras 2 thru 6 only when SSP 07-345 is used.
2

The State Water Resources Control Board (SWRCB) has issued to the Department a permit that governs storm water and non-storm water discharges from the Department's properties, facilities, and activities. The Department's permit is entitled "Order No. 99 - 06 - DWQ, NPDES No. CAS000003, National Pollutant Discharge Elimination System (NPDES) Permit, Statewide Storm Water Permit and Waste Discharge Requirements (WDRs) for the State of California, Department of Transportation (Caltrans)." Copies of the Department's permit are available for review from the SWRCB, Storm Water Permit Unit, 1001 "I" Street, P.O. Box 1977, Sacramento, California 95812-1977, Telephone: (916) 341-5254, and may also be obtained at:

http://www.waterboards.ca.gov/water_issues/programs/stormwater/

3. Use for projects outside the Lake Tahoe Hydrologic Unit to specify that both the Caltrans permit and the general permit apply, including the modifications to the general that require sampling and analysis plans.

The Department's permit references and incorporates by reference the current statewide general permit issued by the SWRCB entitled "Order No. 99-08-DWQ, National Pollutant Discharge Elimination System (NPDES) General Permit No. CAS000002, Waste Discharge Requirements (WDRs) for Discharges of Storm Water Runoff Associated with Construction Activity" that regulates discharges of storm water and non-storm water from construction activities disturbing one acre or more of soil in a common plan of development. Sampling and analysis requirements as specified in SWRCB Resolution No. 2001-46 are added to the statewide general permit. Copies of the statewide permit and modifications thereto are available for review from the SWRCB, Storm Water Permit Unit, 1001 "I" Street, P.O. Box 1977, Sacramento, California 95812-1977, Telephone: (916) 341-5254 and may also be obtained at:

http://www.waterboards.ca.gov/water_issues/programs/stormwater/

4. Use ONLY for projects within the Lake Tahoe Hydrologic Unit.

This project includes construction activities that will result in land disturbance within the Lake Tahoe Hydrologic Unit. The Lahontan Regional Water Quality Control Board has issued a regional general permit that governs storm water and non-storm water discharges resulting from

construction activities in the Lake Tahoe Hydrologic Unit. The Lake Tahoe regional general permit is entitled "Board Order No. 6-00-03, National Pollutant Discharge Elimination System General Permit No. CAG616002 for Discharges of Storm Water Runoff Associated with Construction Activity Involving Land Disturbance in the Lake Tahoe Hydrologic Unit – El Dorado, Placer, and Alpine Counties." A copy of the regional permit is available for review from the Lahontan Region South Lake Tahoe Office, 2501 Lake Tahoe Blvd., South Lake Tahoe, California 96150, Telephone: (530) 542-5400 and may also be obtained at:

http://www.waterboards.ca.gov/lahontan/water_issues/programs/storm_water/index.shtml

5*. Use ONLY for projects where storm water is regulated under a project-specific or RWQCB general permit (other than the Lake Tahoe General Permit). Insert the RWQCB name that issued the permit, permit title, permit number, and address where a copy of the permit is available. Also, include Para 2 and 3.
To determine if a project-specific or RWQCB general permit applies to the project, contact the applicable RWQCB. Contact information for the RWQCBs is available on the SWRCB Internet web site at http://www.waterboards.ca.gov/water_boards.shtml.

The _____ RWQCB has issued a permit which governs storm water and non-storm water discharges resulting from construction activities in the project area. The RWQCB permit is entitled "National Pollutant Discharge Elimination System (NPDES) Permit _____, Permit No. _____." Copies of the RWQCB permit are available for review from _____.

6

The NPDES permits that regulate this project, as referenced above, are collectively referred to in this section as the "permits."

7. Use ONLY for projects within the Lake Tahoe Hydrologic Unit when SSP 07-340 is used.

This project includes construction activities that will result in land disturbance within the Lake Tahoe Hydrologic Unit. The Lahontan RWQCB has issued a regional general permit that governs storm water and non-storm water discharges resulting from construction activities in the Lake Tahoe Hydrologic Unit. The Lake Tahoe regional general permit is entitled "Board Order No. 6-91-31, WDID No. 6A0999999999 General Waste Discharge Requirements for Construction of Small Commercial, Multi-Family Residential, Utility and Public Works Projects Lake Tahoe Basin." A copy of the regional permit is available for review from the Lahontan Region South Lake Tahoe Office, 2501 Lake Tahoe Blvd., South Lake Tahoe, California 96150, Telephone: (530) 542-5400 and may also be obtained at:

http://www.swrcb.ca.gov

8. Use only when SSP 07-345 is used.

This project shall conform to the permits and modifications thereto. The Contractor shall maintain copies of the permits at the project site and shall make them available during construction.

9

The Contractor shall know and comply with provisions of Federal, State, and local regulations and requirements that govern the Contractor's operations and storm water and non-storm water discharges from the project site and areas of disturbance outside the project limits during construction. Attention is directed to Sections 7-1.01, "Laws to be Observed," 5-1.18, "Property and Facility Preservation," 7-1.12, "Indemnification and Insurance," and 9-1.07E(5), "Penalty Withholds," of the Standard Specifications.

10

The Contractor shall notify the Engineer immediately upon request from the regulatory agencies to enter, inspect, sample, monitor, or otherwise access the project site or the Contractor's records pertaining to water pollution control work. The Contractor and the Department shall provide copies of correspondence, notices of violation, enforcement actions, or proposed fines by regulatory agencies to the requesting regulatory agency.

USE WITH 2006 STANDARDS.
Use if nesting period or radius of discovery differs from Section 14-6.02. Add detail for specific species such as swallows or for specific exclusion issues or devices.
Consult with the project biologist, or when unavailable, District or HQ Biologist, for guidance regarding use of the specification and items such as nesting period and radius of discovery.
Use item code 066041 Bird Protection if needed.

5-1.__ BIRD PROTECTION

1*. Insert nesting period; consult with the district biologist

The Department anticipates nesting or attempted nesting by migratory and nongame birds from _____ to _____.

2*. Insert bird species in column 1. Insert distance from the nest or bird in table column 2. Add additional rows as needed for additional bird species.

Stop all work within a 100-foot radius of the discovery except as specified in the following table:

Radii Exceptions

Species	Work stoppage radii (feet)

USE WITH 2006 STANDARDS.
Use in ALL projects.

SECTION 6. (BLANK)

SECTION 7. (BLANK)

SECTION 8. MATERIALS

SECTION 8-1. MISCELLANEOUS

USE WITH 2006 STANDARDS.
Use in ALL projects.
Use with amended Section 39, "Hot Mix Asphalt."
DO NOT EDIT.

8-1.__ PREQUALIFIED AND TESTED SIGNING AND DELINEATION MATERIALS

The Department maintains the following list of Prequalified and Tested Signing and Delineation Materials. The Engineer shall not be precluded from sampling and testing products on the list of Prequalified and Tested Signing and Delineation Materials.

2

The manufacturer of products on the list of Prequalified and Tested Signing and Delineation Materials shall furnish the Engineer a Certificate of Compliance in conformance with the provisions in Section 6-1.07, "Certificates of Compliance," of the Standard Specifications for each type of traffic product supplied.

3

For those categories of materials included on the list of Prequalified and Tested Signing and Delineation Materials, only those products shown within the listing may be used in the work. Other categories of products, not included on the list of Prequalified and Tested Signing and Delineation Materials, may be used in the work provided they conform to the requirements of the Standard Specifications.

4

Materials and products may be added to the list of Prequalified and Tested Signing and Delineation Materials if the manufacturer submits a New Product Information Form to the New Product Coordinator at the Transportation Laboratory. Upon a Departmental request for samples, sufficient samples shall be submitted to permit performance of required tests. Approval of materials or products will depend upon compliance with the specifications and tests the Department may elect to perform.

5

PAVEMENT MARKERS, PERMANENT TYPE

6

Retroreflective With Abrasion Resistant Surface (ARS)

1. Apex, Model 921AR (4" x 4")
2. Ennis Paint, Models C88 (4" x 4"), 911 (4" x 4") and C80FH
3. Ray-O-Lite, Models "AA" ARC II (4" x 4") and ARC Round Shoulder (4" x 4")
4. 3M Series 290 (3.5" x 4")
5. 3M Series 290 PSA
6. Glowlite, Inc Model 988AR (4" x 4")

7

Retroreflective With Abrasion Resistant Surface (ARS)

(for recessed applications only)

1. Ennis Paint, Model 948 (2.3" x 4.7")
2. Ennis Paint, Model 944SB (2" x 4")*

3. Ray-O-Lite, Model 2002 (2" x 4.6")
4. Ray-O-Lite, Model 2004 (2" x 4")*
   *For use only in 4.5 inch wide (older) recessed slots

8

Non-Reflective, 4-inch Round

1. Apex Universal (Ceramic)
2. Apex Universal, Models 929 (ABS) and 929PP (Polypropylene)
3. Glowlite, Inc. (Ceramic) and PP (Polypropylene)
4. Hi-Way Safety, Inc., Models P20-2000W and 2001Y (ABS)
5. Interstate Sales, "Diamond Back" (Polypropylene)
6. Novabrite Models Cdot (White) Cdot-y (Yellow), Ceramic
7. Novabrite Models Pdot-w (White) Pdot-y (Yellow), Polypropylene
8. Three D Traffic Works TD10000 (ABS), TD10500 (Polypropylene)
9. Ray-O-Lite, Ray-O-Dot (Polypropylene)

9

PAVEMENT MARKERS, TEMPORARY TYPE

10

Temporary Markers For Long Term Day/Night Use (180 days or less)

1. Vega Molded Products "Temporary Road Marker" (3" x 4")
2. Pexco LLC, Halftrack model 25, 26 and 35

11

Temporary Markers For Short Term Day/Night Use (14 days or less)

(For seal coat or chip seal applications, clear protective covers are required)

1. Apex Universal, Model 932
2. Pexco LLC, Models T.O.M., T.R.P.M., and "HH" (High Heat)
3. Hi-Way Safety, Inc., Model 1280/1281
4. Glowlite, Inc., Model 932

12

STRIPING AND PAVEMENT MARKING MATERIAL

13

Permanent Traffic Striping and Pavement Marking Tape

1. Advanced Traffic Marking, Series 300 and 400
2. Brite-Line, Series 1000
3. Brite-Line, "DeltaLine XRP"
4. Swarco Industries, "Director 35" (For transverse application only)
5. Swarco Industries, "Director 60"
6. 3M, "Stamark" Series 380 and 270 ES
7. 3M, "Stamark" Series 420 (For transverse application only)

14

Temporary (Removable) Striping and Pavement Marking Tape (180 days or less)

1. Advanced Traffic Marking, Series 200
2. Brite-Line, Series 100
3. Garlock Rubber Technologies, Series 2000

4. P.B. Laminations, Aztec, Grade 102
5. Swarco Industries, "Director-2"
6. Trelleborg Industries, R140 Series
7. 3M Series 620 "CR", and Series 780
8. 3M Series A145, Removable Black Line Mask
   (Black Tape: for use only on Hot mix asphalt surfaces)
9. Advanced Traffic Marking Black "Hide-A-Line"
   (Black Tape: for use only on Hot mix asphalt surfaces)
10. Brite-Line "BTR" Black Removable Tape
    (Black Tape: for use only on Hot mix asphalt surfaces)
11. Trelleborg Industries, RB-140
    (Black Tape: for use only on Hot mix asphalt surfaces)

15

Preformed Thermoplastic (Heated in place)

1. Flint Trading Inc., "Hot Tape"
2. Flint Trading Inc., "Premark Plus"
3. Ennis Paint Inc., "Flametape"

16

Ceramic Surfacing Laminate, 6" x 6"

1. Highway Ceramics, Inc.

17

CLASS 1 DELINEATORS

18

One Piece Driveable Flexible Type, 66-inch

1. Pexco LLC, "Flexi-Guide Models 400 and 566"
2. Carsonite, Curve-Flex CFRM-400
3. Carsonite, Roadmarker CRM-375
4. FlexStake, Model 654 TM
5. GreenLine Model CGD1-66

19

Special Use Type, 66-inch

1. Pexco LLC, Model FG 560 (with 18-inch U-Channel base)
2. Carsonite, "Survivor" (with 18-inch U-Channel base)
3. Carsonite, Roadmarker CRM-375 (with 18-inch U-Channel base)
4. FlexStake, Model 604
5. GreenLine Model CGD (with 18-inch U-Channel base)
6. Impact Recovery Model D36, with #105 Driveable Base
7. Safe-Hit with 8-inch pavement anchor (SH248-GP1)
8. Safe-Hit with 15-inch soil anchor (SH248-GP2) and with 18-inch soil anchor (SH248-GP3)
9. Safe-Hit RT 360 Post with Soil Mount Anchor (GPS)
10. Shur-Tite Products, Shur-Flex Drivable

20

Surface Mount Type, 48-inch

1. Bent Manufacturing Company, Masterflex Model MFEX 180-48
2. Carsonite, "Channelizer"
3. FlexStake, Models 704, 754 TM, and EB4
4. Impact Recovery Model D48, with #101 Fixed (Surface-Mount) Base
5. Three D Traffic Works "Channelflex" ID No. 522248W
6. Flexible Marker Support, Flexistiff Model C-9484
7. Safe-Hit, SH 248 SMR

21

CHANNELIZERS

22

Surface Mount Type, 36-inch

1. Bent Manufacturing Company, Masterflex Models MF-360-36 (Round) MF-180-36 (Flat) and MFEX 180—36
2. Pexco LLC, Flexi-Guide Models FG300PE, FG300UR, and FG300EFX
3. Carsonite, "Super Duck" (Round SDR-336)
4. Carsonite, Model SDCF03601MB "Channelizer"
5. FlexStake, Models 703, 753 TM, and EB3
6. GreenLine, Model SMD-36
7. Hi-way Safety, Inc. "Channel Guide Channelizer" Model CGC36
8. Impact Recovery Model D36, with #101 Fixed (Surface-Mount) Base
9. Safe-Hit, Guide Post, Model SH236SMA and Dura-Post, Model SHL36SMA
10. Three D Traffic Works "Boomerang" 5200 Series
11. Flexible Marker Support, Flexistiff Model C-9484-36
12. Shur-Tite Products, Shur-Flex

23

Lane Separation System

1. Pexco LLC, "Flexi-Guide (FG) 300 Curb System"
2. Qwick Kurb, "Klemmfix Guide System"
3. Dura-Curb System
4. Tuff Curb
5. FG 300 Turnpike Curb

24

CONICAL DELINEATORS, 42-inch

(For 28-inch Traffic Cones, see Standard Specifications)

1. Bent Manufacturing Company "T-Top"
2. Plastic Safety Systems "Navigator-42"
3. TrafFix Devices "Grabber"
4. Three D Traffic Works "Ringtop" TD7000, ID No. 742143
5. Three D Traffic Works, TD7500
6. Work Area Protection Corp. C-42

25

OBJECT MARKERS

26

Type "K", 18-inch

1. Pexco LLC, Model FG318PE
2. Carsonite, Model SMD 615
3. FlexStake, Model 701 KM
4. Safe-Hit, Model SH718SMA

27

Type "Q" Object Markers, 24-inch

1. Bent Manufacturing "Masterflex" Model MF-360-24
2. Pexco LLC, Model FG324PE
3. Carsonite, "Channelizer"
4. FlexStake, Model 701KM
5. Safe-Hit, Models SH824SMA_WA and SH824GP3_WA
6. Three D Traffic Works ID No. 531702W and TD 5200
7. Three D Traffic Works ID No. 520896W
8. Safe-Hit, Dura-Post SHLQ-24 inch

28

CONCRETE BARRIER MARKERS AND TEMPORARY RAILING (TYPE K) REFLECTORS

29

Impactable Type

1. ARTUK, "FB"
2. Pexco LLC, Models PCBM-12 and PCBM-T12
3. Duraflex Corp., "Flexx 2020" and "Electriflexx"
4. Hi-Way Safety, Inc., Model GMKRM100
5. Plastic Safety Systems "BAM" Models OM-BARR and OM-BWAR
6. Three D Traffic Works "Roadguide" Model TD 9300

30

Non-Impactable Type

1. ARTUK, JD Series
2. Plastic Safety Systems "BAM" Models OM-BITARW and OM-BITARA
3. Vega Molded Products, Models GBM and JD
4. Plastic Vacuum Forming, "Cap-It C400"

31

METAL BEAM GUARD RAIL POST MARKERS

(For use to the left of traffic)

1. Pexco LLC, "Mini" (3" x 10")
2. Creative Building Products, "Dura-Bull, Model 11201"
3. Duraflex Corp., "Railrider"
4. Plastic Vacuum Forming, "Cap-It C300"

32

CONCRETE BARRIER DELINEATORS, 16-inch

(For use to the right of traffic)

1. Pexco LLC, Model PCBM T-16
2. Safe-Hit, Model SH216RBM
3. Three D Traffic Works "Roadguide" Model 9400

33

CONCRETE BARRIER-MOUNTED MINI-DRUM (10" x 14" x 22")

1. Stinson Equipment Company "SaddleMarker"

34

GUARD RAILING DELINEATOR

(Place top of reflective element at 48 inches above plane of roadway)

35

Wood Post Type, 27-inch

1. Pexco LLC, FG 427 and FG 527
2. Carsonite, Model 427
3. FlexStake, Model 102 GR
4. GreenLine GRD 27
5. Safe-Hit, Model SH227GRD
6. Three D Traffic Works "Guardflex" TD9100
7. New Directions Mfg, NDM27
8. Shur-Tite Products, Shur-Tite Flat Mount

36

Steel Post Type

1. Carsonite, Model CFGR-327

37

RETROREFLECTIVE SHEETING

38

Channelizers, Barrier Markers, and Delineators

1. Avery Dennison T-6500 Series (For rigid substrate devices only)
2. Avery Dennison WR-7100 Series
3. Nippon Carbide Industries, Flexible Ultralite Grade (ULG) II
4. Reflexite, PC-1000 Metalized Polycarbonate
5. Reflexite, AC-1000 Acrylic
6. Reflexite, AP-1000 Metalized Polyester
7. Reflexite, Conformalight, AR-1000 Abrasion Resistant Coating
8. 3M, High Intensity

39

Traffic Cones, 4-inch and 6-inch Sleeves

1. Nippon Carbide Industries, Flexible Ultralite Grade (ULG) II
2. Reflexite, Vinyl, "TR" (Semi-transparent) or "Conformalight"
3. 3M Series 3840

4. Avery Dennison S-9000C

40

Drums

1. Avery Dennison WR-6100
2. Nippon Carbide Industries, Flexible Ultralite Grade (ULG) II
3. Reflexite, "Conformalight", "Super High Intensity" or "High Impact Drum Sheeting"
4. 3M Series 3810

41

Barricades: Type I, Medium-Intensity (Typically Enclosed Lens, Glass-Bead Element)

1. Nippon Carbide Industries, CN8117
2. Avery Dennison, W 1100 series
3. 3M Series CW 44

42

Barricades: Type II, Medium-High-Intensity (Typically Enclosed Lens, Glass-Bead Element)

1. Avery Dennison, W-2100 Series

43

Vertical Clearance Signs: Structure Mounted

1. 3M Model 4061, Diamond Grade DG3, Fluorescent Yellow

44

Signs: Type II, Medium-High-Intensity (Typically Enclosed Lens, Glass-Bead Element)

1. Avery Dennison, T-2500 Series
2. Nippon Carbide Industries, Nikkalite 18000

45

Signs: Type III, High-Intensity (Typically Encapsulated Glass-Bead Element)

1. Avery Dennison, T-5500A and T-6500 Series
2. Nippon Carbide Industries, Nikkalite Brand Ultralite Grade II
3. 3M 3870 and 3930 Series

46

Signs: Type IV, High-Intensity (Typically Unmetallized Microprismatic Element)

1. Avery Dennison, T-6500 Series
2. Nippon Carbide Industries, Crystal Grade, 94000 Series
3. Nippon Carbide Industries, Model No. 94847 Fluorescent Orange
4. 3M Series 3930 and Series 3924S

47

Signs: Type VI, Elastomeric (Roll-Up) High-Intensity, without Adhesive

1. Avery Dennison, WU-6014

2. Novabrite LLC, "Econobrite"
3. Reflexite "Vinyl"
4. Reflexite "SuperBright"
5. Reflexite "Marathon"
6. 3M Series RS20

48

Signs: Type VII, Super-High-Intensity (Typically Unmetallized Microprismatic Element)

1. 3M Series 3924S, Fluorescent Orange
2. 3M LDP Series 3970

49

Signs: Type VIII, Super-High-Intensity (Typically Unmetallized Microprismatic Element)

1. Avery Dennison, T-7500 Series
2. Avery Dennison, T-7511 Fluorescent Yellow
3. Avery Dennison, T-7513 Fluorescent Yellow Green
4. Avery Dennison, W-7514 Fluorescent Orange
5. Nippon Carbide Industries, Nikkalite Crystal Grade Series 92800
6. Nippon Carbide Industries, Nikkalite Crystal Grade Model 92847 Fluorescent Orange

50

Signs: Type IX, Very-High-Intensity (Typically Unmetallized Microprismatic Element)

1. 3M VIP Series 3981 Diamond Grade Fluorescent Yellow
2. 3M VIP Series 3983 Diamond Grade Fluorescent Yellow/Green
3. 3M VIP Series 3990 Diamond Grade
4. Avery Dennison T-9500 Series
5. Avery Dennison, T9513, Fluorescent Yellow Green
6. Avery Dennison, W9514, Fluorescent Orange
7. Avery Dennison, T-9511 Fluorescent Yellow

51

SPECIALTY SIGNS

52

1. Reflexite "Endurance" Work Zone Sign (with Semi-Rigid Plastic Substrate)

53

ALTERNATIVE SIGN SUBSTRATES

54

Fiberglass Reinforced Plastic (FRP) and Expanded Foam PVC

1. Fiber-Brite (FRP)
2. Sequentia, "Polyplate" (FRP)
3. Inteplast Group "InteCel" (0.5 inch for Post-Mounted CZ Signs, 48-inch or less)(PVC)

Aluminum Composite, Temporary Construction Signs and Permanent Signs up to 4 foot, 7 Inches

1. Alcan Composites "Dibond Material, 80 mils"
2. Mitsubishi Chemical America, Alpolic 350
3. Bone Safety Signs, Bone Light ACM (temporary construction signs only)

USE WITH 2006 STANDARDS.
Use in a project with State-furnished materials.

8-1.__ STATE-FURNISHED MATERIALS

1. Add items as necessary.
Delete any item not furnished by the State.
Change Model 170 controller assembly as applicable.
Insert the plant numbers as shown on the plans and address where the Contractor is to pick them up.

The State furnishes you with:

- Sign panels for roadside signs and overhead sign structures
- Sign overlay panels for roadside signs and overhead sign structures
- Mast arm sign hanger assemblies
- Laminated wood box posts with metal caps for roadside signs
- Hardware for mounting sign panels as follows:
  - Aluminum closure inserts for multiple panel laminated signs
  - A-1 and A-2 mounting hardware for mounting laminated sign panels on overhead sign structures
  - A-3 mounting hardware for mounting overhead formed panels
- Disks for survey monuments
- Marker panels, including reflectors, for Type N, Type P, and Type R object markers
- Concrete barrier markers
- Magnetic detector amplifiers and magnetic sensing elements
- Loop detector sensor units
- Model 170 controller assembly, including controller unit, completely wired controller cabinet, and detector sensor units
- Modems
- Individual or axle type scales for materials hauling equipment on bridges
- Components of battery backup system as follows:
  - Inverter/charger unit
  - Power transfer relay
  - Manually-operated bypass switch
  - Battery harness
  - Utility interconnect wires
  - Battery temperature probe
  - Relay contact wires
- Plants numbered _____ on the plans. Pick these plants up at _____.
- Recycled water signs, labels, decals, and tags

2. Use if the State furnishes controller assemblies. Insert address.

The State furnishes you with completely wired controller cabinets with auxiliary equipment but without controller unit at _____. At least 48 hours before you pick up the materials, inform the Engineer what you will pick up and when you will pick it up.

3. Use if the State furnishes a changeable message sign. Insert address.

The State furnishes you with a Model 500 changeable message sign, wiring harness, and controller assembly, including the controller unit and completely wired cabinet, at _____. At least 48 hours before you pick up the materials, inform the Engineer what you will pick up and when you will pick it up.

4. Use if the Contractor is to pick up State-furnished sign panels and overlay panels from the District Warehouse. Insert address and telephone number.

The State furnishes you with sign panels and overlay panels at the District warehouse at _____. At least 48 hours before you pick up the materials, inform the Engineer and the District warehouse manager what you will pick up and when you will pick it. Also, inform the manager the number, type, and size of the sign panels and Contract number. The manager's telephone number is (___) ___-____.

5. Use if the State furnishes recycled materials. Insert material, address, and telephone number.

The State furnishes you with _____ at the District Recycle Center at _____. At least 48 hours before you pick up the materials, inform the Engineer and the District recycle coordinator the Contract number, what you will pick up, and when you will pick it up. The coordinator's telephone number is (___) ___-____.

6. Use if the State does not furnish replacement plants.

You must furnish replacement plants. The State does not pay you for the replacement plants.

7. Use if the State furnishes replacement plants. Insert each plant name and its deduction.

The State furnishes you with replacement plants at the same location as the original plants. For each replacement plant, the Department deducts the amount shown in the following table. If you do not plant all of the replacement plants before work completion, return unplanted plants to the location designated by the Engineer. If the plants are fit for future use, the Department credits you for them.

Replacement-Plant Deductions

Botanical name (common name)	Deduction per plant ($)

USE WITH 2006 STANDARDS.
Use in all District 07, 08, 11, & 12 Highway Planting projects when slag aggregates are not to be used.

8-1.__ SLAG AGGREGATE

Aggregate produced from slag resulting from any steel-making process or from air-cooled iron blast furnace slag shall not be used on this project.

USE WITH 2006 STANDARDS.
Use in all projects. Delete Section 8-2 title that is not applicable.

SECTION 8-2. CONCRETE

SECTION 8-2. BLANK

USE WITH 2006 STANDARDS.
Use "Strength Development Time" section for projects in Climate Areas I or II.
Use "Supplementary Cementitious Materials" section for projects with minor concrete.
If neither section is used, do not use this SSP.

8-2.__ PORTLAND CEMENT CONCRETE

Portland cement concrete shall conform to the provisions in Section 90, "Portland Cement Concrete," of the Standard Specifications and these special provisions.

STRENGTH DEVELOPMENT TIME

2. Delete Paras 2 and 3 when in Climate Area III, and delete section title, "Strength Development Time."

The time allowed to obtain the minimum required compressive strength as specified in Section 90-1.01, "Description," of the Standard Specifications will be 56 days when the Contractor chooses cementitious material that satisfies the following equation:

$$\frac{(41 \times UF) + (19 \times F) + (11 \times SL)}{TC} \geq 7.0$$

Where:

F = Fly ash or natural pozzolan conforming to the requirements in AASHTO Designation: M 295, Class F or N, including the amount in blended cement, pounds per cubic yard. F is equivalent to either FA or FB as defined in Section 90-2.01C, "Required Use of Supplementary Cementitious Materials," of the Standard Specifications

SL = GGBFS, including the amount in blended cement, pounds per cubic yard

UF = Silica fume, metakaolin, or UFFA, including the amount in blended cement, pounds per cubic yard

TC = Total amount of cementitious material used, pounds per cubic yard

3

For concrete satisfying the equation above, the Contractor shall test for the modulus of rupture or compressive strength specified for the concrete involved, at least once every 500 cubic yards, at 28, 42, and 56 days. The Contractor shall submit test results to the Engineer and the Transportation Laboratory, Attention: Office of Concrete Materials.

SUPPLEMENTARY CEMENTITIOUS MATERIALS

4. Delete Paras 4 and 5 and the section heading "Supplementary Cementitious Materials" if there is no minor concrete on the project.

The Contractor may use rice hull ash as a supplementary cementitious material (SCM) to make minor concrete. Rice hull ash shall conform to the requirements in AASHTO Designation: M 321 and the following chemical and physical requirements:

Chemical Requirements	Percent
Silicon Dioxide (SiO_2) [a]	90 min.
Loss on ignition	5.0 max.
Total Alkalies (as Na_2O) equivalent	3.0 max.

Physical Requirements	Percent
Particle size distribution Less than 45 microns Less than 10 microns	 95 50
Strength Activity Index with portland cement [b] 7 days 28 days	 95 (minimum % of control) 110 (minimum % of control)
Expansion at 16 days when testing job materials in conformance with ASTM C 1567 [c]	0.10 max.
Surface Area when testing by nitrogen adsorption in conformance with ASTM D 5604	40.0 m^2/g min.

Notes:
[a] A maximum of 1.0% of the SiO_2 may exist in crystalline form.
[b] When tested in conformance with the requirements for strength activity testing of silica fume in AASHTO Designation: M 307
[c] In the test mix, Type II or Type V portland cement shall be replaced with at least 12% RHA by weight.

5

Rice hull ash will be considered as a Type UF SCM for the purposes of calculating cementitious material requirements in Section 90-2.01C, "Required Use of Supplementary Cementitious Materials," of the Standard Specifications and these special provisions.

USE WITH 2006 STANDARDS.
Use in all projects. Delete Section 8-3 title that is not applicable.

SECTION 8-3. WELDING

SECTION 8-3. (BLANK)

USE WITH 2006 STANDARDS.
Use in ALL projects.
Delete Section 9 title that is not applicable.

SECTION 9. (BLANK)

SECTION 9. DESCRIPTION OF BRIDGE WORK

SECTION 10. CONSTRUCTION DETAILS

SECTION 10-1. GENERAL

USE WITH 2006 STANDARDS.
Excluding seal coat, surfacing, and seismic projects, use on all projects with an estimated contract cost of $750,000 or more and 50 working days (WD) or more. Use 70 WD minimum when Sat, Sun & Holidays are counted as working days. Do not count plant establishment days.
INCLUDE Std Plan T7 in project plans.
NOTE: When projects are located within city or urban areas, District must ensure space is available for signs.
1*. Specify quantity and type of signs. Specify Type 1 for conventional highway; Type 2 for freeway & expressway.

10-1.00 CONSTRUCTION PROJECT INFORMATION SIGNS

Before any major physical construction work readily visible to highway users is started on this contract, the Contractor shall furnish and erect __ Type __ Construction Project Information signs at the locations designated by the Engineer.

2

The signs and overlays shall be of a type and material consistent with the estimated time of completion of the project and shall conform to the details shown on the plans.

3

The sign letters, the border and the Department's construction logos shall conform to the colors (non-reflective) and details shown on the plans, and shall be on a white background (non-reflective). The colors blue and orange shall conform to PR Color Number 3 and Number 6, respectively, as specified in the Federal Highway Administration's Color Tolerance Chart.

4*. Specify type of funding. If County funds are involved (i.e. cooperative agreement provided), specify type of county funding. Otherwise, delete "_____ County Transportation Funds." If project has no Federal funding, delete "Federal Highway Trust Funds."

The sign message to be used for fund types shall consist of the following, in the order shown:

FEDERAL HIGHWAY TRUST FUNDS
STATE HIGHWAY FUNDS
_____ COUNTY TRANSPORTATION FUNDS

5*. Specify applicable type of project. Select only one type of project heading. Determine type of project to use from applicable work descriptions in following table:

Type of Project:	Work Descriptions:
Highway Construction	Construct Expressway, Freeway, Shoulders, Structure, HOV Lane, Ramp, Interchange, Left Turn Lane, Truck Escape Ramp, or Weigh Station; Widen Freeway, Roadway or Shoulders; Realign Roadways.
Highway Repair	Clean & Paint Overhead Sign Structure; Crack, Seal & Grind Pavement; Pavement Markings; Pavement Rehabilitation; Ramp Repaving; Replace Culverts, Drainage Systems, Railroad Crossings, or Sign Structures; Retrofit Curb Ramps.
Highway Improvement	Channelization; Changeable Message Signs; Highway Advisory Radio System; Median Barrier; Motorist Aid Communication System; Ramp Metering; Retaining & Sound Walls; Signal Modification; Signals & Lighting; Traffic Signals; Traffic Count Stations; Traffic Operations System; Slope Protection; Thrie Beam Barrier; Realign Curve; Modify Interchange, or Gore; Reconstruct Interchange.
Bridge Construction	Replace, Remove or Widen Bridge; Construct Overcrossing, Pedestrian Overcrossing, Overhead, Undercrossing, Sidehill Viaduct, or Interchange Connectors.
Bridge Repair	Clean and Paint Bridge; Clean and Replace Joint Seals; Upgrade Joints Seals; Modify Bridge Railing; Raise Bridge; Replace Bridge Bearings; Rehabilitate Bridge Decks; Tunnel Rehabilitation.
Roadside Work	Erosion Control; Highway Planting & Irrigation; Replacement Planting; Revegetation; Irrigation Upgrade; Planting; Restoration and Irrigation; Maintenance Station; Landscape Maintenance Station; Maintenance Yard & Building; Pumping Plant; Roadside Rest Area; Vista Point; Park & Ride Lot; Transit Station; Truck Inspection Facility; Truck Scale; Right of Way Fence Upgrade; Biological or Habitat Enhancement; Treat Contaminated Water Supply.

The sign message to be used for type of work shall consist of the following:

HIGHWAY
CONSTRUCTION
HIGHWAY REPAIR
HIGHWAY
IMPROVEMENT
BRIDGE CONSTRUCTION
BRIDGE REPAIR
ROADSIDE WORK

6

The sign message to be used for the Year of Completion of Project Construction will be furnished by the Engineer. The Contractor shall furnish and install the "Year" sign overlay within 10 working days of notification of the year date to be used.

7

The letter sizes to be used shall be as shown on the plans. The information shown on the signs shall be limited to that shown on the plans.

8

The signs shall be kept clean and in good repair by the Contractor.

9

Upon completion of the work, the signs shall be removed and disposed of outside the highway right of way in conformance with the provisions in Section 7-1.13 of the Standard Specifications.

10. When there is no item for CAS, replace "contract lump sum price paid for construction area signs" with "prices paid for the various contract items of work involved".

Full compensation for furnishing, erecting, maintaining, and removing and disposing of the construction project information signs shall be considered as included in the contract lump sum price paid for construction area signs and no additional compensation will be allowed therefor.

USE WITH 2006 STANDARDS.
LEAD SSP.
Include special features which apply to the project.

10-1.01 ORDER OF WORK

Order of work shall conform to the provisions in Section 5-1.05, "Order of Work," of the Standard Specifications and these special provisions.

USE WITH 2006 STANDARDS.
Add to SSP 05-010

1. Use if there is slope paving to be constructed on the project.

Attention is directed to "Slope Paving" of these special provisions regarding constructing a 4' x 6' test panel prior to placing the permanent slope paving.

2. Use if there are curb ramp detectable warning surfaces to be installed on the project.

Attention is directed to "Miscellaneous Concrete Construction" of these special provisions regarding constructing a 2' x 2' test panel prior to constructing curb ramps with detectable warning surfaces.

3. Use if there are sound walls with precast reinforced concrete panels to be constructed on the project.

Attention is directed to "Sound Wall (Precast Concrete Panel)" of these special provisions regarding constructing a 3' x 3' test panel prior to constructing the precast reinforced concrete panels for the sound wall.

4. Use if there are sound walls with timber panels to be constructed on the project.

Attention is directed to "Sound Wall (Timber)" of these special provisions regarding furnishing a 2' x 2' test panel prior to constructing the sound wall of wood panels, plywood sheets or framed plywood panels.

5. Use if there are diaphragm bolsters to be constructed on the project.

Attention is directed to "Diaphragm Bolster" of these special provisions regarding constructing 2 preconstruction shotcrete test panels prior to performing shotcrete work if shotcrete is substituted for cast-in-place concrete for the diaphragm bolsters.

6. Use if there is a fire plan for the project.

Attention is directed to "Fire Plan" of these special provisions regarding cooperating with local fire prevention authorities and implementing the fire plan established for this project.

7. Use when SSP 40-020 is included in the project.

Attention is directed to "Replace Concrete Pavement (Rapid Strength Concrete)" of these special provisions in regards to providing Pre-Operation Conference and the Just-In-Time Training prior to commencing pavement replacement operations.

8. Use when SSPs S5-760 and 07-446 are used.

Attention is directed to "Environmentally Sensitive Area" and "Temporary Fence (Type ESA)" of these special provisions. Prior to beginning work, the boundaries of the Environmentally Sensitive Areas (ESA) shall be clearly delineated in the field. The boundaries shall be delineated by the installation of temporary fence (Type ESA).

USE WITH 2006 STANDARDS
Miscellaneous "Order of Work" Paras for planting and seeding work, and for irrigation work.
Add to SSP 05-010 or to other "Order of Work" SSPs as required.

1. Use when plants are to be grown for this project.

Some plants required for this project may not be readily available and may have to be grown specifically for this project. Within 30 days after the contract has been approved, furnish to the Engineer a statement from the vendor that the order for the plants to be grown for this contract, including inspection plants and replacement plants, has been received and accepted by the vendor. The statement from the vendor must include the names, sizes, and quantities of plants ordered and the anticipated dates of delivery. Notify the Engineer in writing when the vendor has started to grow the plants.

2. Use on Highway Planting projects if plants are required.

Within 30 days after the contract has been approved, furnish the Engineer a statement from the vendor that the order for the plants required for this contract, including inspection plants, has been received and accepted by the vendor. The statement from the vendor must include the names, sizes, and quantities of plants ordered and the anticipated date of delivery.

3. Use on Highway Construction projects if plants are required. Edit as required for short duration contracts.

At least 60 days before planting the plants, furnish the Engineer a statement from the vendor that the order for the plants required for this contract, including inspection plants, has been received and accepted by the vendor. The statement from the vendor must include the names, sizes, and quantities of plants ordered and the anticipated date of delivery.

4. Use when plants are required.

Place orders for replacement plants with the vendor at the appropriate time so that the roots of the replacement plants are not in a root-bound condition.

5. Use only on Highway Planting projects.

For progress payment purposes, the Department will withhold 50 percent of the estimated value of highway planting work done until a statement from the vendor that the order for the plants required for this contract is submitted to the Engineer.

6. Use when SSP 20-030, SSP 20-040, SSP 20-041, SSP 20-047, SSP 20-049, SSP 20-050, SSP 20-055 or SSP 20–530 is used and seed is required, but do not use when only barley or ryegrass seed is specified. Edit days as required for short duration contracts.

At least 60 days before applying seeds, furnish the Engineer a statement from the vendor that the order for the seed required for this contract has been received and accepted by the vendor. The statement from the vendor must include the names and quantity of seed ordered and the anticipated date of delivery.

7. Use when SSP 20-030 and 20-040 is used and a unique type of straw other than wheat, barley, or rice is required. Edit days as required for short duration contracts.

At least 60 days before applying a straw other than wheat, barley, or rice, furnish the Engineer a statement from the vendor that the order for the type of straw required for this contract has been received and accepted by the vendor. The statement from the vendor must include the names and quantity of the type of straw ordered and the anticipated date of delivery.

8. Use when SSP 20-252 is used; otherwise delete. Do not use with SSP 20-251 when "Maintain Existing Planted Areas" is paid for as Extra Work.

Before the start of irrigation work, check for deficiencies of existing plants that are to remain in place as specified under "Maintain Existing Planted Areas" of these special provisions.

9. Use when SSP 20-301 is used; otherwise delete.

Locate existing irrigation water line crossovers and conduits before performing work on the irrigation system as specified under "Locate Existing Crossover and Conduits" of these special provisions.

10

Unless otherwise shown on the plans or specified in these special provisions, conduits to be jacked or drilled or installed by the open trench method for water line crossovers and sprinkler control crossovers must be installed before the installation of other pipe supply lines.

11. Use only on Highway Planting projects when SSP 20-300 is used and when checking of existing irrigation facilities is required; otherwise delete Para.

Before the start of irrigation work, check existing irrigation facilities that are to remain in place, as specified under "Existing Highway Irrigation Facilities" of these special provisions.

12. Use only on Highway Construction projects when checking of existing irrigation facilities is required and add SSP 20-304; otherwise delete Para.

Do not perform clearing, grubbing, and earthwork operations in areas where existing irrigation facilities are to remain in place until existing irrigation facilities have been checked for proper operation as specified under "Existing Highway Irrigation Facilities" of these special provisions.

13. Use only on Highway Construction projects when SSP 20-110 is used; otherwise delete.

Locate existing conduits to be extended as specified under "Extend Irrigation Crossovers" of these special provisions before the start of other work in these areas.

14. Use when irrigation systems contain electrical components (other than electrical service only); otherwise delete.

Submittal of working drawings for electrical components must comply with Section 20-5.027B, "Wiring Plans and Diagrams," of the Standard Specifications.

15. Use when SSP 20-625 requires irrigation components to be installed in the enclosure cabinet prior to field installation; otherwise delete.

Preinstall irrigation components in the irrigation controller enclosure cabinet before field installation as specified under "Irrigation Controller Enclosure Cabinet" of these special provisions.

USE WITH 2006 STANDARDS.
STORM WATER POLLUTION PREVENTION PLAN (SWPPP) for use with ALL projects where construction activities, such as clearing, grading, and excavation result in one acre or more of soil disturbance; or for projects where significant water quality impairment will result, as determined by the Regional Water Quality Control Board (RWQCB).

10-1.___ WATER POLLUTION CONTROL

GENERAL

Water pollution control work shall conform to the provisions in Section 7-1.01G, "Water Pollution," of the Standard Specifications, section of these special provisions entitled "Relations With California Regional Water Quality Control Board," and these special provisions.

2. Use when designers prepare a Storm Water Information Handout.

A Storm Water Information Handout has been prepared for this contract and is available as described in "Project Information" of these special provisions.

3

The Contractor may obtain other National Pollutant Discharge Elimination System (NPDES) permits that apply to activities and mobile operations within or outside of the project limits including hot mix asphalt batch plants, material borrow areas, concrete plants, staging areas, storage yards, or access roads.

Paras 4 and 5. Edit if your District has a local office for obtaining guides and manuals.

4

The Contractor shall perform water pollution control work in conformance with the requirements in the "Storm Water Pollution Prevention Plan (SWPPP) and Water Pollution Control Program (WPCP) Preparation Manual" and its addenda in effect on the day the Notice to Bidders is dated. This manual is referred to as the "Preparation Manual." Copies of the Preparation Manual may be obtained from:

State of California
Department of Transportation
Publication Distribution Unit
1900 Royal Oaks Drive
Sacramento, California 95815
Telephone: (916) 445-3520

5

The Preparation Manual and other references for performing water pollution control work are available from the Department's Construction Storm Water and Water Pollution Control web site at:

http://www.dot.ca.gov/hq/construc/stormwater/stormwater1.htm

6

Before the start of job site activities, the Contractor shall provide training for project managers, supervisory personnel, and employees involved with water pollution control work. The training shall include:

A. Rules and regulations
B. Implementation and maintenance for:

    1. Temporary Soil Stabilization
    2. Temporary Sediment Control
    3. Tracking Control
    4. Wind Erosion Control

7

The Contractor shall designate in writing a Water Pollution Control Manager (WPCM). The Contractor shall submit a statement of qualifications describing the training, work history, and expertise of the proposed WPCM. The qualifications shall include either:

A. A minimum of 24 hours of Department approved storm water management training described at Department's Construction Storm Water and Water Pollution Control web site.
B. Certification as a Certified Professional in Erosion and Sediment Control (CPESC).

8

The WPCM shall be:

A. Responsible for water pollution control work.
B. The primary contact for water pollution control work.
C. Have authority to mobilize crews to make immediate repairs to water pollution control practices.

9

The Contractor may designate one manager to prepare the SWPPP and a different manager to implement the plan. The WPCP preparer shall meet the training requirements for the WPCM.

10

STORM WATER POLLUTION PREVENTION PLAN

The Contractor shall submit a Storm Water Pollution Prevention Plan (SWPPP) to the Engineer for approval. The SWPPP shall conform to the requirements in the Preparation Manual, the NPDES permit, and these special provisions. The SWPPP shall be submitted in place of the water pollution control program required by the provisions in Section 7-1.01G, "Water Pollution," of the Standard Specifications.

11

The SWPPP shall include water pollution control practices:

A. For storm water and non-storm water from areas outside of the job site related to construction activities for this contract such as:

    1. Staging areas.

2. Storage yards.
3. Access roads.

B. Appropriate for each season as described in "Implementation Requirements" of these special provisions.
C. For activities or mobile operations related to all NPDES permits.

12

The SWPPP shall include a schedule that:

A. Describes when work activities that could cause water pollution will be performed.
B. Identifies soil stabilization and sediment control practices for disturbed soil area.
C. Includes dates when these practices will be 25, 50, and 100 percent complete.
D. Shows 100 percent completion of these practices before the rainy season.

13*. Add items included in the contract under the appropriate practices.

The SWPPP shall include the following temporary water pollution control practices and their associated contract items of work as shown on the plans or specified in these special provisions:

A. Temporary Soil Stabilization

1. _____

B. Temporary Sediment Control

1. _____

C. Tracking Control

1. _____

D. Wind Erosion Control

1. _____

E. Non-Storm Water Management

1. _____

F. Waste Management and Materials Pollution Control

1. _____

14*. Use when construction of one or more permanent controls is necessary.

The SWPPP shall include the following contract items of work for permanent water pollution control as shown on the plans or as specified in these special provisions:

A. _____
B. _____
C. _____

15. Use for most projects outside the Lake Tahoe Hydrologic Unit. For less complex projects, fast-track schedules, or short construction periods, the time needed for submittal, review, and revision of the SWPPP may be reduced. Deviation from the time frames indicated are allowed only with the approval of the District Construction Storm Water Coordinator.

Within 20 days after contract approval, the Contractor shall submit 3 copies of the SWPPP to the Engineer. The Contractor shall allow 20 days for the Engineer's review. If revisions are required, the Engineer will provide comments and specify the date that the review stopped. The Contractor shall revise and resubmit the SWPPP within 15 days of receipt of the Engineer's comments. The Engineer's review will resume when the complete SWPPP is resubmitted. When the Engineer approves the SWPPP, the Contractor shall submit 4 copies of the approved SWPPP to the Engineer. The Contractor may proceed with construction activities if the Engineer conditionally approves the SWPPP while minor revisions are being completed.

16. Use for projects within the Lake Tahoe Hydrologic Unit requiring 30-day review by the Lahontan RWQCB before beginning construction. Deviation from the timeframes indicated are allowed only with the approval of the District Construction Storm Water Coordinator.

Within 20 days after contract approval, the Contractor shall submit 3 copies of the SWPPP to the Engineer. The Contractor shall allow 20 days for the Engineer's review. If revisions are required, the Engineer will provide comments and specify the date that the review stopped. The Contractor shall revise and resubmit the SWPPP within 15 days of receipt of the Engineer's comments. The Engineer's review will resume when the complete SWPPP is resubmitted. When the Engineer approves the SWPPP, the Contractor shall submit 4 copies of the approved SWPPP to the Engineer. After approval, the Engineer will submit one copy of the approved SWPPP to the Lahontan RWQCB for their review and comment. If the Lahontan RWQCB provides comments to the SWPPP, the Contractor shall amend the SWPPP. Construction activities shall begin no sooner than 30 days after the Engineer approves the SWPPP.

17*. Insert related permits obtained by the Department for the project such as Fish & Game permits, US Army Corps of Engineers permits, RWQCB 401 Certifications, and RWQCB Waste Discharge Requirements for Aerially Deposited Lead Reuse. Otherwise, delete.

The SWPPP shall include a copy of the _____.

18

The Contractor shall not perform work that may cause water pollution until the SWPPP has been approved by the Engineer. The Engineer's review and approval shall not waive any contract requirements and shall not relieve the Contractor from complying with Federal, State and local laws, regulations, and requirements.

19. Include for complex multi-year projects, or where multiple construction phases will occur. Otherwise, delete.

The Contractor shall amend the SWPPP annually and shall resubmit it to the Engineer 25 days before the defined rainy season.

20

If there is a change in construction schedule or activities, the Contractor shall prepare an amendment to the SWPPP to identify additional or revised water pollution control practices. The Contractor shall submit the amendment to the Engineer for review within a time agreed to by the Engineer not to exceed the number of days specified for the initial submittal of the SWPPP. The Engineer will review the amendment within the same time allotted for the review of the initial submittal of the SWPPP.

21. Include supplemental funds to cover extra work for item 066596, "Additional Water Pollution Control."

If directed by the Engineer or requested in writing by the Contractor and approved by the Engineer, changes to the water pollution control work specified in these special provisions will be allowed. Changes may include addition of new water pollution control practices. The Contractor shall incorporate these changes in the SWPPP. Additional water pollution control work will be paid for as extra work in accordance with Section 4-1.03D, "Extra Work," of the Standard Specifications.

22

The Contractor shall keep a copy of the approved SWPPP at the job site. The SWPPP shall be made available when requested by a representative of the Regional Water Quality Control Board, State Water Resources Control Board, United States Environmental Protection Agency, or the local storm water management agency. Requests from the public shall be directed to the Engineer.

Delete Paras 23 thru 43 & Para 66 for projects within the Lake Tahoe Hydrologic Unit or for projects that DO NOT discharge to waters of the United States (e.g. USGS blue line).

23

SAMPLING AND ANALYSIS

The Contractor shall include a Sampling and Analysis Plan (SAP) in the SWPPP to monitor the effectiveness of the water pollution control practices. The Contractor shall prepare the SAP in conformance with the Preparation Manual.

24

The Contractor shall designate trained personnel to collect water quality samples. The personnel and training shall be documented in the SAP. Training shall consist of the following elements:

A. SAP review,
B. Health and safety review, and
C. Sampling simulations.

25

In the SAP the Contractor shall describe the following water quality sampling procedures:

A. Sampling preparation,
B. Collection,
C. Quality assurance and quality control,
D. Sample labeling,
E. Collection documentation,
F. Sample shipping,
G. Chain of custody,

H. Sample numbering, and
I. Precautions from the construction site health and safety plan.

26

The Contractor shall document sample collection during precipitation.

27

Samples to be analyzed in the field shall be taken by the Contractor's designated sampling personnel using collection and analysis methods, and equipment calibration specified by the manufacturer of the sampling equipment. Samples to be analyzed by a laboratory, shall be sampled, preserved, and analyzed by a State-certified laboratory in conformance with the requirements in 40 CFR Part 136, "Guidelines Establishing Test Procedures for the Analysis of Pollutants." The Contractor shall identify the State-certified laboratory, sample containers, preservation requirements, holding times, and analysis method in the SAP. A list of State-certified laboratories that are approved by the Department is available at:

http://www.dhs.ca.gov/ps/ls/ELAP/html/lablist.htm

Use Paras 28 thru 33 only when there is storm water discharge from the construction site directly into a body of water listed as already being impaired by sedimentation/siltation or turbidity. The Clean Water Act, Section 303(d) list is available in an appendix to the general permit at http://www.waterboards.ca.gov/stormwtr/gen_const.html#const_permit. These paragraphs do not apply to discharges that flow directly into tributaries of listed bodies of water, which are not themselves listed; or to discharges into Municipal Separate Storm Sewer Systems (MS4), including Caltrans drainage systems.

28*. Insert name of listed body of water into which the project will discharge. Insert current impairment and what to monitor (e.g., sediment/siltation or turbidity).

Sediment and Turbidity

This project discharges directly into _____, a body of water required by the Clean Water Act, Section 303(d) to be listed as impaired due to _____. The Contractor shall describe in the SAP the schedule and strategy for monitoring _____ in the listed body of water in accordance with the provisions in this section.

29

The Contractor shall develop the SAP schedule so that water quality samples are taken within 2 hours of discharge from precipitation during daylight hours (sunrise to sunset), regardless of the time of year, day of the week, or condition of the construction site. If precipitation occurs again after at least 72 hours of dry weather the Contractor shall take new samples, however, sampling will not be required more than 4 times in 30 days.

30

In the SAP the Contractor shall identify the locations where runoff sources on the construction site discharge directly into the listed body of water, and the locations where water flows onto the project with the potential to combine with runoff that discharges directly into the listed body of water. These locations shall also be shown on the SWPPP Water Pollution Control Drawings.

31

The Contractor shall identify locations for collecting water quality samples and the reason for their selection. Sampling locations shall also be shown on the SWPPP Water Pollution Control Drawings. The sampling locations shall include:

A. Upstream from direct discharges from the construction site,
B. Immediately downstream from the last point of direct discharge from the construction site, and
C. Immediately downhill from the locations where water flows onto the right of way.

32

The Contractor shall specify in the SAP that for discharges into bodies of water listed as impaired due to sedimentation/siltation, samples will be analyzed for both settleable solids in accordance with the requirements of EPA Test Method 160.5, and total suspended solids in accordance with EPA Test Method 160.2; or for suspended sediment concentration in accordance with the requirements in ASTM Designation: D 3977.

33

For discharges to 303(d) bodies of water listed as impaired due to turbidity the Contractor shall specify in the SAP that samples will be analyzed for turbidity in accordance with the requirements in EPA Test Method 180.1.

34. Use Paras 34 thru 40 only if storm water discharges directly to a water of the United States (e.g., USGS blue line) or discharges to a drainage system that discharges into a water of the United States.

Non-Visible Pollutants

This project has the potential to discharge non-visible pollutants in storm water from the construction site. The Contractor shall include in the SAP a description of the sampling and analysis strategy to be implemented on the project for monitoring non-visible pollutants.

35

In the SAP the Contractor shall identify potential non-visible pollutants that will be present on the construction site associated with the following:

A. Construction materials and wastes;
B. Existing contamination due to historical site usage; or
C. Application of soil amendments, including soil stabilization products, with the potential to alter pH or contribute toxic pollutants to storm water.

36

The Contractor shall show the locations planned for storage and use of the potential non-visible pollutants on the SWPPP Water Pollution Control Drawings.

37

The Contractor shall include in the SAP the following list of conditions that require sampling when observed during a storm water inspection:

A. Materials or wastes containing potential non-visible pollutants are not stored under watertight conditions.
B. Materials or wastes containing potential non-visible pollutants are stored under watertight conditions, but:

1. A breach, leakage, malfunction, or spill is observed;
2. The leak or spill has not been cleaned up before precipitation; and
3. There is the potential for discharge of non-visible pollutants to surface waters or drainage system.

C. Construction activities; such as application of fertilizer, pesticide, herbicide, methyl methacrylate concrete sealant, or non-pigmented curing compound; have occurred during precipitation or within 24 hours preceding precipitation, and have the potential to discharge pollutants to surface waters or drainage system.
D. Soil amendments, including soil stabilization products, with the potential to alter pH levels or contribute toxic pollutants to storm water runoff have been applied, and have the potential to discharge pollutants to surface waters or drainage system (unless independent test data are available that demonstrate acceptable concentrations of non-visible pollutants in the soil amendment).
E. Storm water runoff from an area contaminated by historical usage of the site has the potential to discharge pollutants to surface waters or drainage system.

38

The Contractor shall describe in the SAP the schedule for collecting a sample downhill from each non-visible pollutant source and an uncontaminated control sample, during the first 2 hours of discharge from precipitation during daylight hours that result in enough discharge for sample collection. If discharge flows to the non-visible pollutant source, a sample shall be collected immediately downhill from where the discharge enters the Department's right of way. If precipitation occurs again after at least 72 hours of dry weather the Contractor shall take new samples.

39

In the SAP the Contractor shall identify sampling locations for collecting downstream and control samples, and the reason for their selection. The control sampling location shall be selected so the sample does not come into contact with materials, wastes or areas associated with potential non-visible pollutants or disturbed soil areas. The Contractor shall show non-visible pollutant sampling locations on the SWPPP Water Pollution Control Drawings.

40

The Contractor shall identify in the SAP the analytical method to be used for downhill and control samples for potential non-visible pollutants on the project.

Use Paras 41 thru 43 and Para 66 when Para 28 thru 33 or when Paras 34 thru 40 are used.

41

Analytical Results and Evaluation

The Contractor shall submit a hard copy and electronic copy of water quality analytical results, and quality assurance and quality control data to the Engineer within 5 days of sampling for field analyses, and within 30 days for laboratory analyses. The Contractor shall also provide an evaluation of whether the downhill samples show levels of the tested parameter higher than in the control sample. If downhill or downstream samples show increased levels, the Contractor will assess the water pollution control measures, site conditions, and surrounding influences to determine the probable cause for the increase. As determined by the assessment, the Contractor will repair or modify water pollution control measures to address increases and amend the

SWPPP as necessary. Electronic results (in one of the following file formats: .xls, .txt, .csv, .dbs, or .mdb) shall have the following information:

A. Sample identification number.
B. Contract number.
C. Constituent.
D. Reported value.
E. Analytical method.
F. Method detection limit.
G. Reported limit.

42

The Contractor shall maintain the water quality sampling documentation and analytical results with the SWPPP on the project site.

43

If construction activities or knowledge of site conditions change such that discharges or sampling locations change, the Contractor shall amend the SAP in conformance with this section, "Water Pollution Control."

44

IMPLEMENTATION REQUIREMENTS

The Contractor's responsibility for SWPPP implementation shall continue throughout any temporary suspension of work ordered in conformance with the provisions in Section 8-1.05, "Temporary Suspension of Work," of the Standard Specifications.

45

If the Contractor or the Engineer identifies a deficiency in the implementation of the approved SWPPP, the deficiency shall be corrected immediately, unless an agreed date for correction is approved in writing by the Engineer. The deficiency shall be corrected before the onset of precipitation. If the Contractor fails to correct the deficiency by the agreed date or before the onset of precipitation, the Department may correct the deficiency and deduct the cost of correcting deficiencies from payments.

46

If the Contractor fails to conform to the provisions of this section, "Water Pollution Control," the Engineer may order the suspension of work until the project complies with the requirements of this section.

47. Use if early construction is required for permanent water pollution control items such as slope paving, rock slope protection, ditch lining, and infiltration or detention basins, etc. Identify the schedule in "Order of Work."

The Contractor shall construct permanent water pollution control items identified in the SWPPP as specified in "Order of Work" of these special provisions. The Contractor shall maintain the permanent water pollution control items in the locations and condition shown on the plans throughout the duration of the project.

48

Year-Round

The Contractor shall monitor the National Weather Service weather forecast on a daily basis during the contract. The Contractor may use an alternative weather forecasting service if

approved by the Engineer. Appropriate water pollution control practices shall be in place before precipitation.

49

The Contractor may discontinue earthwork operations for a disturbed area for up to 21 days and the disturbed soil area will still be considered active. When earthwork operations in the disturbed area have been completed, the Contractor shall implement appropriate water pollution control practices within 15 days, or before predicted precipitation, whichever occurs first.

50. Use only for projects at or below 4,000 feet in elevation in the Lahontan RWQCB areas of Districts 2, 3, 6, 7, 8, 9, & 10 and Colorado River Basin RWQCB areas of Districts 8 & 11. Consult the District NPDES or Construction Storm Water Coordinator for special soil stabilization and sediment control required by the RWQCB to be implemented during the rainy season for the project, and add these special requirements as part of Para 50. Delete Para 51.

Rainy Season

The Contractor shall provide soil stabilization and sediment control practices during the rainy season between August 1 and October 1, and between November 1 and May 1.

51*. Use for projects not using Para 50 and insert designated rainy seasons as defined in Appendix E of the June 2007 Stormwater Management Plan (SWMP) (available at: http://www.dot.ca.gov/hq/env/stormwater/index.htm). Delete Para 50, but keep heading. For projects with 2 rainy seasons, add the following text to the end of the paragraph: ", and between _____ and _____." and insert dates of second rainy season.

The Contractor shall provide soil stabilization and sediment control practices during the rainy season between _____ and _____.

52. Use when early assurance of rainy season control practice implementation is deemed critical by the District Construction Storm Water Coordinator.

The Contractor shall implement soil stabilization and sediment control practices a minimum of 10 days before the start of the rainy season.

53*. For projects with less than 5 acres of total disturbed project area, insert the disturbed project area as the active disturbed soil area.

For most projects with 5 acres or more total disturbed project area, insert 5 acres as the active disturbed soil area. For sensitive projects, the 5 acres of active disturbed soil area may be decreased. The active disturbed soil area may be increased if concurrence is obtained from the appropriate District Storm Water Coordinator.

During the defined rainy season, the active disturbed soil area of the project site shall be not more than ____ acres. The Engineer may approve expansions of the active disturbed soil area limit if requested in writing. The Contractor shall maintain soil stabilization and sediment control materials on site to protect disturbed soil areas.

54. Use for all projects located in the Lake Tahoe, Truckee River, East Fork Carson River, or West Fork Carson River Hydrologic Units, or for projects above 5,000 feet in elevation in the portions of Mono County or Inyo County within the Lahontan RWQCB, unless granted a variance by the RWQCB Executive Officer.

Winter Shutdown

The Contractor shall not remove vegetation or disturb existing ground surface conditions between October 15 and May 1.

55*. For items "D" & "E" below, edit the inspection period. For Lake Tahoe Hydrologic Unit "D" shall be every day and "E" shall be daily. Otherwise, insert time appropriate for project conditions.

INSPECTION AND MAINTENANCE

The WPCM shall inspect the water pollution control practices identified in the SWPPP as follows:

A. Before a forecasted storm,
B. After precipitation that causes site runoff,
C. At 24-hour intervals during extended precipitation,
D. On a predetermined schedule, a minimum of once every 2 weeks outside of the defined rainy season, and
E. On a predetermined schedule, a minimum of once a week during the defined rainy season.

56

The WPCM shall oversee the maintenance of the water pollution control practices.

57

The WPCM shall use the Storm Water Quality Construction Site Inspection Checklist provided in the Preparation Manual or an alternative inspection checklist provided by the Engineer. A copy of the completed site inspection checklist shall be submitted to the Engineer within 24 hours of finishing the inspection.

58. Use in projects with plant establishment work.

The Contractor may request approval from the Engineer to suspend inspections of water pollution control practices after work except plant establishment is complete. The Engineer's approval is contingent on approval from the Regional Water Quality Control Board. The Contractor shall not suspend inspections until written approval from the Engineer is received.

59. Edit the number of days in the second sentence if a local RWQCB requires a shorter notification period.

REPORTING REQUIREMENTS

If the Contractor identifies discharges into surface waters or drainage systems causing or potentially causing pollution, or if the project receives a written notice or order from a regulatory agency, the Contractor shall immediately inform the Engineer. The Contractor shall submit a written report to the Engineer within 7 days of the discharge, notice or order. The report shall include the following information:

A. The date, time, location, and nature of the operation, type of discharge and quantity, and the cause of the notice or order.
B. The water pollution control practices used before the discharge, or before receiving the notice or order.
C. The date of placement and type of additional or altered water pollution control practices placed after the discharge, or after receiving the notice or order.
D. A maintenance schedule for affected water pollution control practices.

60

Annual Certifications

By June 15 of each year, the Contractor shall complete and submit to the Engineer an Annual Certification of Compliance, as contained in the Preparation Manual.

61

PAYMENT

During each estimate period the Contractor fails to conform to the provisions in this section, "Water Pollution Control," or fails to implement the water pollution control practices shown on the plans or specified elsewhere in these special provisions as items of work, the Department will withhold 25 percent of the progress payment.

62

Withholds for failure to perform water pollution control work will be in addition to all other withholds provided for in the contract. The Department will return performance-failure withholds in the progress payment following the correction of noncompliance.

63. Include Item 074019 "Prepare Storm Water Pollution Prevention Plan."

The contract lump sum price paid for prepare storm water pollution prevention plan shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals and for doing all the work involved in preparing, obtaining approval of, and amending the SWPPP and inspecting water pollution control practices as specified in the Standard Specifications and these special provisions, and as directed by the Engineer.

64. Use only for projects with 60 working days or less.

Payments for prepare storm water pollution prevention plan will be made as follows:

A. After the SWPPP has been approved by the Engineer, 75 percent of the contract item price for prepare storm water pollution prevention plan will be included in the monthly progress estimate.
B. After acceptance of the contract in conformance with the provisions in Section 7-1.17, "Acceptance of Contract," of the Standard Specifications, payment for the remaining percentage of the contract item price for prepare storm water pollution prevention plan will be made in conformance with the provisions in Section 9-1.08B, "Payment Before Final Estimate."

65. Use only for projects with more than 60 working days.

Payments for prepare storm water pollution prevention plan will be made as follows:

A. After the SWPPP has been approved by the Engineer, 50 percent of the contract item price for prepare storm water pollution prevention plan will be included in the monthly progress estimate.

B. Forty percent of the contract item price for prepare storm water pollution prevention plan will be paid over the life of the contract.

C. After acceptance of the contract in conformance with the provisions in Section 7-1.17, "Acceptance of Contract," of the Standard Specifications, payment for the remaining 10 percent of the contract item price for prepare storm water pollution prevention plan will be made in conformance with the provisions in Section 9-1.08B, "Payment Before Final Estimate."

66. Include additional supplemental funds to cover extra work for Item 066597 "Storm Water Sampling and Analysis."

Storm water sampling and analysis will be paid for as extra work as provided in Section 4-1.03D, "Extra Work," of the Standard Specifications. No payment will be made for the preparation, collection, analysis, and reporting of storm water samples where appropriate water pollution control practices are not implemented before precipitation or if a failure of a water pollution control practice is not corrected before precipitation.

67

Implementation of water pollution control practices in areas outside the highway right of way not specifically provided for in the SWPPP or in these special provisions will not be paid for.

68

Water pollution control practices for which there are separate contract items of work will be measured and paid for as those contract items of work.

USE WITH 2006 STANDARDS.
Use for waste management and material pollution control for concrete activities, and to eliminate discharge of portland cement concrete slurries and asphalt concrete wastes from entering storm drain systems or watercourses.
Refer to WM-8 Concrete Waste Management, of the Caltrans Storm Water Quality Handbook Construction Site Best Management Practices (BMPs) Manual for information related to the use of this BMP.
Include Standard Plan T59.
Use BEES item 074032 Temporary Concrete Washout Facility.

10-1.__ TEMPORARY CONCRETE WASHOUT FACILITY

GENERAL

Summary

1

This work includes removal and disposal of concrete waste by furnishing, maintaining, and removing temporary concrete washout facilities.

2. Replace "SWPPP" with "WPCP" if SSP 07-340 is used.

SWPPP must describe and include the use of temporary concrete washout facilities as a water pollution control practice for waste management and materials pollution control.

Submittals

3

At least 5 business days before concrete activities start, submit:

1. Location of washout facilities
2. Name and location of off-site concrete waste disposal facility to receive concrete waste
3. Copy of permit issued by RWQCB for off-site commercial disposal facility
4. Copy of license for off-site commercial disposal facility
5. Copy of permit issued by state or local agency having jurisdiction over disposal facility if disposal site is located outside of the State of California
6. Gravel-filled bag fabric
7. Plastic liner
8. Alternate attachment device for staples, if used

Quality Control and Assurance

4

Retain and submit records of disposed concrete waste.

MATERIALS

Straw Bales

5

Straw bales must comply with Section 20-2.06, "Straw," of the Standard Specifications and be:

1. At least 14 inches wide, 18 inches high, 36 inches long, and weigh at least 50 pounds.
2. Composed entirely of vegetative matter, except for binding material.
3. Bound by wire, nylon, or polypropylene string. Do not use jute or cotton binding. Baling wire must be minimum 16 gauge. Nylon or polypropylene string must be approximately 0.08-inch in diameter with 80 pounds of breaking strength.

Stakes

6

Stakes may be either wood or metal and must comply with the following:

1. Wood stakes must be:

    1.1. Untreated fir, redwood, cedar, or pine and cut from sound timber
    1.2. Straight and free of loose or unsound knots and other defects which would render stakes unfit for use
    1.3. Pointed on the end to be driven into the ground
    1.4. At least 2" x 2" x 48" in size

2. Metal stakes must be at least 0.5-inch diameter and 48 inches long. Tops of metal stakes must be bent at a 90-degree angle or capped with an orange or red plastic safety cap that fits snugly to the metal stake.

Concrete Washout Sign

7

Concrete washout sign must comply with Section 12-3.06B, "Portable Signs" of the Standard Specifications and:

1. Be approved by the Engineer
2. Consist of base, framework, and sign panel
3. Be made of plywood
4. Be minimum 2' x 4' in size
5. Read "Concrete Washout" with 3 inches high black letters on white background

Gravel-filled Bag Fabric

8

Geosynthetic fabric for temporary gravel bag berm must consist of one of these:

1. Polyester
2. Polypropylene
3. Combined polyester and polypropylene

9

Sample under ASTM D 4354, Procedure C.

10

Test under ASTM D 4759. All properties must be based on Minimum Average Roll Value (MARV).

11

Identify, store, and handle under ASTM D 4873.

12

Protect geosynthetics from moisture, sunlight, and damage during shipping and storage. Label each unit with manufacturer's name, identifying information, and product identification.

13

Gravel-filled bag fabric must comply with requirements in this table:

Specification	Requirements
Grab breaking load 1-inch grip, lb, min. in each direction	205
Apparent elongation percent, min., in each direction	50
Water Flow Rate max. average roll value, gallons per minute/square foot	80-150
Permittivity 1/sec., min	1.2
Apparent opening size max. average roll value, U.S. Standard sieve size	40-80
Ultraviolet Degradation percent of original unexposed grab breaking load 500 hour, minimum	70

Gravel

14

Gravel for gravel-filled bags must be:

1. From 3/8 to 3/4 inch in diameter
2. Clean and free of clay balls, organic matter, and other deleterious materials

Gravel-filled Bag

15

Gravel-filled bag must:

1. Be made of gravel-filled bag fabric.
2. Have inside dimensions from 24 to 32 inches long, and from 16 to 20 inches wide.
3. Have bound opening to retain gravel. Opening must be sewn with yarn, bound with wire, or secured with a closure device.
4. Weigh from 30 to 50 pounds when filled with gravel.

Plastic Liner

16

Plastic liner must be:

1. Single ply, new polyethylene sheeting
2. At least 10 mils thick
3. Free of holes, punctures, tears or other defects
4. Without seams or overlapping joints

CONSTRUCTION

Placement

17

Place concrete washout facilities at job site:

1. Before concrete placement activities start
2. In the immediate area of concrete work as approved by the Engineer
3. No closer than 50 feet from storm drain inlets, open drainage facilities, ESAs, or watercourses
4. Away from construction traffic or public access areas

18

Install a concrete washout sign adjacent to each temporary concrete washout facility location.

19

For at grade and below grade concrete washout facilities:

1. Build to contain liquid and concrete waste without seepage, spills, or overflow
2. Build in sufficient quantity and size to contain liquid and concrete waste generated by washout activities for concrete wastes
3. Install with plastic liner

20

If approved, the length and width of temporary concrete washout facility may be increased from minimum dimensions shown on the plans.

21

If below grade concrete washout facilities are used, construct berms from compacted native material. Gravel may be used in conjunction with compacted native material.

Operation

22. Edit if different concrete wastes are anticipated.

Use concrete washout facilities for:

1. Washout from concrete delivery trucks
2. Slurries containing portland cement concrete or hot mix asphalt from sawcutting, coring, grinding, grooving, and hydro-concrete demolition
3. Concrete waste from mortar mixing stations

23

Relocate concrete washout facilities as needed for concrete construction work.

24

Do not fill higher than 6 inches below rim.

25. Edit if a different inspection schedule is needed.

Your WPC manager must inspect concrete washout facilities:

1. Daily if concrete work occurs daily
2. Weekly if concrete work does not occur daily

Maintenance

26

Maintain temporary concrete washout facility by:

1. Providing adequate holding capacity with 12-inch minimum freeboard
2. Removing and disposing of hardened concrete under Section 15-3.02, "Removal Methods"
3. Patching holes, rips, and voids in plastic liner with tape
4. If plastic liner leaks after patching, replace plastic liner
5. Repairing or replacing gravel-filled bags when they become split, torn, unraveled, or gravel spills out

27

Repair temporary concrete washout facility within 24 hours of discovering damage unless the Engineer approves a longer period.

28

If your vehicles, equipment, or activities disturb or displace temporary concrete washout facility, repair temporary concrete washout facility at your expense.

Removal

29

Dispose of concrete waste material at a facility specifically licensed to receive solid concrete waste, liquid concrete waste, or both. When concrete washout facility is full, remove and dispose of concrete waste within 2 days.

30

When the Engineer determines that temporary concrete washout facility is not needed, remove and dispose of it under Section 7-1.13, "Disposal of Material Outside the Highway Right of Way," of the Standard Specifications.

31

Backfill and repair ground disturbance, including holes and depressions, caused by the installation and removal of temporary concrete washout facility, under Section 15-1.02, "Preservation of Property," of the Standard Specifications.

PAYMENT

32

Temporary concrete washout facility is measured by the actual count of concrete washout facilities in place.

33

The contract unit price paid for temporary concrete washout facility includes full compensation for furnishing all labor, materials, tools, equipment, and incidentals, and for doing all the work involved in constructing, maintaining, and removing the concrete washout facility,

including removal and disposal of concrete waste, as specified in the Standard Specifications and these special provisions, and as directed by the Engineer.

USE WITH 2006 STANDARDS.
Use when one or more projects are adjacent to or within the project limits.
Edit table to include Contract No., county-route-postmile (beginning and end limits of project adjacent to or within the limits of this project), city where project is located, and type of construction work.

10-1.__ COOPERATION

It is anticipated that work by another contractor may be in progress adjacent to or within the limits of this project during progress of the work on this contract. The following table lists contracts anticipated to be in progress during this contract.

Contract No.	Co-Rte-PM	Location	Type of Work

2

Comply with Section 7-1.14, "Cooperation," of the Standard Specifications.

USE WITH 2006 STANDARDS.
Use in ALL projects.
Category 1, 2 and 3 temporary traffic control devices to be used in work zones.

10-1.__ CONSTRUCTION AREA TRAFFIC CONTROL DEVICES

Flagging, signs, and temporary traffic control devices furnished, installed, maintained, and removed when no longer required shall conform to the provisions in Section 12, "Construction Area Traffic Control Devices," of the Standard Specifications and these special provisions.

2

Category 1 temporary traffic control devices are defined as small and lightweight (less than 100 pounds) devices. These devices shall be certified as crashworthy by crash testing, crash testing of similar devices, or years of demonstrable safe performance. Category 1 temporary traffic control devices include traffic cones, plastic drums, portable delineators, and channelizers.

3

If requested by the Engineer, the Contractor shall provide written self-certification for crashworthiness of Category 1 temporary traffic control devices at least 5 business days before beginning any work using the devices or within 2 business days after the request if the devices are already in use. Self-certification shall be provided by the manufacturer or Contractor and shall include the following:

A. Date,
B. Federal Aid number (if applicable),
C. Contract number, district, county, route and post mile of project limits,
D. Company name of certifying vendor, street address, city, state and zip code,
E. Printed name, signature and title of certifying person; and
F. Category 1 temporary traffic control devices that will be used on the project.

The Contractor may obtain a standard form for self-certification from the Engineer.

4

Category 2 temporary traffic control devices are defined as small and lightweight (less than 100 pounds) devices that are not expected to produce significant vehicular velocity change, but may cause potential harm to impacting vehicles. Category 2 temporary traffic control devices include barricades and portable sign supports.

5

Category 2 temporary traffic control devices shall be on the Federal Highway Administration's (FHWA) list of Acceptable Crashworthy Category 2 Hardware for Work Zones. This list is maintained by FHWA and can be located at:

http://safety.fhwa.dot.gov/roadway_dept/policy_guide/road_hardware/listing.cfm?code=workzone

The Department also maintains this list at:

http://www.dot.ca.gov/hq/traffops/signtech/signdel/pdf/Category2.pdf

6

Category 2 temporary traffic control devices that have not received FHWA acceptance shall not be used. Category 2 temporary traffic control devices in use that have received FHWA acceptance shall be labeled with the FHWA acceptance letter number and the name of the manufacturer. The label shall be readable and permanently affixed by the manufacturer. Category 2 temporary traffic control devices without a label shall not be used.

7

If requested by the Engineer, the Contractor shall provide a written list of Category 2 temporary traffic control devices to be used on the project at least 5 business days before beginning any work using the devices or within 2 business days after the request if the devices are already in use.

8

Category 3 temporary traffic control devices consist of temporary traffic-handling equipment and devices that weigh 100 pounds or more and are expected to produce significant vehicular velocity change to impacting vehicles. Temporary traffic-handling equipment and devices include crash cushions, truck-mounted attenuators, temporary railing, temporary barrier, and end treatments for temporary railing and barrier.

9

Type III barricades may be used as sign supports if the barricades have been successfully crash tested, meeting the NCHRP Report 350 criteria, as one unit with a construction area sign attached.

10

Category 3 temporary traffic control devices shall be shown on the plans or on the Department's Highway Safety Features list. This list is maintained by the Division of Engineering Services and can be found at:

http://www.dot.ca.gov/hq/esc/approved_products_list/

11

Category 3 temporary traffic control devices that are not shown on the plans or not listed on the Department's Highway Safety Features list shall not be used.

12

Full compensation for providing self-certification for crashworthiness of Category 1 temporary traffic control devices and for providing a list of Category 2 temporary traffic control devices used on the project shall be considered as included in the prices paid for the various items of work requiring the use of the Category 1 or Category 2 temporary traffic control devices and no additional compensation will be allowed therefor.

USE WITH 2006 STANDARDS.
Use in ALL projects.
Include 2006 Standard Plans S93, S94, and S95 as needed.
Include SSP S8-M03, SSP 56-800, SSP 56-810, SSP 56-820, SSP 56-830 and SSP 56-840 for stationary mounted construction area signs.
Include SSP 56-850 as needed for stationary mounted construction area signs.
Include a lump sum contract item for Construction Area Signs, except when the only Construction Area Signs required for the project are for traffic control system for lane closure.

10-1.__ CONSTRUCTION AREA SIGNS

Construction area signs for temporary traffic control shall be furnished, installed, maintained, and removed when no longer required in conformance with the provisions in Section 12, "Construction Area Traffic Control Devices," of the Standard Specifications and these special provisions.

2. Use only when stationary mounted construction area signs are used.

Attention is directed to "Furnish Sign" of these special provisions.

3

Attention is directed to the provisions in "Prequalified and Tested Signing and Delineation Materials" of these special provisions. Type II retroreflective sheeting shall not be used on construction area sign panels. Type III, IV, VII, VIII, or IX retroreflective sheeting shall be used for stationary mounted construction area sign panels.

4. Use only if SSP 05-000, "Construction Project Information Signs," is used.

Attention is directed to "Construction Project Information Signs" of these special provisions regarding the number and type of construction project information signs to be furnished, erected, maintained, and removed and disposed of.

5

Unless otherwise shown on the plans or specified in these special provisions, the color of construction area warning and guide signs shall have black legend and border on orange background, except W10-1 or W47(CA) (Highway-Rail Grade Crossing Advance Warning) sign shall have black legend and border on yellow background.

6. Use only when construction area signs are fluorescent orange in color.

Orange background on construction area signs shall be fluorescent orange.

7

Repair to construction area sign panels will not be allowed, except when approved by the Engineer. At nighttime under vehicular headlight illumination, sign panels that exhibit irregular luminance, shadowing or dark blotches shall be immediately replaced at the Contractor's expense.

8

The Contractor shall notify the appropriate regional notification center for operators of subsurface installations at least 2 business days, but not more than 14 days, prior to commencing excavation for construction area sign posts. The regional notification centers include, but are not limited to, the following:

Notification Center	Telephone Number
Underground Service Alert	811

9

Excavations required to install construction area signs shall be performed by hand methods without the use of power equipment, except that power equipment may be used if it is determined there are no utility facilities in the area of the proposed post holes. The post hole diameter, if backfilled with portland cement concrete, shall be at least 4 inches greater than the longer dimension of the post cross section.

10

Construction area signs placed within 15 feet from the edge of the travel way shall be mounted on stationary mounted sign supports as specified in "Construction Area Traffic Control Devices" of these special provisions.

11

The Contractor shall maintain accurate information on construction area signs. Signs that are no longer required shall be immediately covered or removed. Signs that convey inaccurate information shall be immediately replaced or the information shall be corrected. Covers shall be replaced when they no longer cover the signs properly. The Contractor shall immediately restore to the original position and location any sign that is displaced or overturned, from any cause, during the progress of work.

USE WITH 2006 STANDARDS.
Use when work will be performed over, on, or adjacent to lanes carrying public traffic, including the contiguous or adjacent shoulders.

10-1.__ MAINTAINING TRAFFIC

Maintaining traffic shall conform to the provisions in Sections 7-1.08, "Public Convenience," Section 7-1.09, "Public Safety," and Section 12, "Construction Area Traffic Control Devices," of the Standard Specifications and these special provisions.

2. As directed by Traffic Operations, edit to match project closure requirements.

Closure is defined as the closure of a traffic lane or lanes, including shoulder, ramp or connector lanes, within a single traffic control system.

3. Use when closures are allowed or required. Include SSP 12-260, 12-265, 12-270, or 12-275.

Closures shall conform to the provisions in "Traffic Control System for Lane Closure" of these special provisions.

4. Use when no closures are allowed. Edit as appropriate when multiple locations are involved.

No work that would require a closure shall be performed.

USE WITH 2006 STANDARDS.
Add to SSP 12-010.
Include SSPs 12-128, 12-160, 12-162, 12-164, 12-166, 12-168, and 12-170 as appropriate.
Specific location and road condition edits do not require approval by the SSP Owner, but must be verified by the District Traffic Manager or the District TMP Manager.

Work that interferes with public traffic shall be limited to the hours when lane closures are allowed, except for work required under Sections 7-1.08, "Public Convenience," and Section 7-1.09, "Public Safety."

2. Use when no lane requirement charts are provided and SSP 12-128 is included.

The full width of the traveled way shall be open for use by public traffic as shown in the table "Lane Closure Restriction for Designated Legal Holidays and Special Days" included in this section, "Maintaining Traffic."

3. Use if designated legal holidays are specified in Para 2 or if lane requirement charts are included. Edit for holidays that do not generate heavy traffic through project.

Designated legal holidays are: January 1st, the third Monday in February, the last Monday in May, July 4th, the first Monday in September, November 11th, Thanksgiving Day, and December 25th. When a designated legal holiday falls on a Sunday, the following Monday shall be a designated legal holiday. When November 11th falls on a Saturday, the preceding Friday shall be a designated legal holiday.

4*. Use if special days are specified in Para 2. Include SSP 12-128 after this SSP. Consult with District Traffic Managers for special days.

Special days are:_____.

Paras 5, 6, and 7 to be edited by the District Traffic Manager or the District TMP Manager.

5*

Under one-way reversing traffic control operations, public traffic may be stopped in one direction for periods not to exceed _____ minutes. After each stoppage, all accumulated traffic for that direction shall pass through the work zone before another stoppage is made.

6*

The maximum length of a single stationary lane closure shall be ____ miles.

7*

Not more than ____ separate stationary lane closures will be allowed in each direction of travel at one time. Concurrent stationary closures shall be spaced no closer than ____ miles apart.

8. Use on seal coat projects if closure is not in conflict with SSP 12-128. Add "or ramp in each direction of travel" after "one lane" when multilane roadways are involved.

On days that lane closures are not allowed, one lane may be closed to maintain the seal coat surface as required in Section 37-1.07, "Finishing," of the Standard Specifications. Lane

closures to maintain the seal coat surface shall be restricted to daylight hours when public traffic will be least inconvenienced and delayed, as determined by the Engineer.

9. Use in urban areas where local agencies regulate traffic.

Local authorities shall be notified at least 5 business days before work begins. The Contractor shall cooperate with local authorities to handle traffic through the work area and shall make arrangements to keep the work area clear of parked vehicles.

10*. Use if closures of local streets are included in the project. To be edited by the District Traffic Manager or the District TMP Manager.

No work on local streets is allowed between ____ a.m. and ____ a.m. and between ____ p.m. and ____ p.m.

11. Delete when SSP 12-166 is used or if adjacent ramps do not exist on the project.

Ramps adjacent to the closed freeway lane may be closed.

12. Use when closure of several on ramps and off ramps are required within the project limits.

Adjacent ramps, in the same direction of travel, servicing 2 consecutive local streets shall not be closed simultaneously unless directed by the Engineer.

Paras 13, 14, 15, 16, and 17 to be used when special signs are required for concrete slab replacement work and for connector or ramp closures.

13. Use for projects with concrete slab replacement work.

C43(CA) (FRESH CONCRETE) sign shall be used at the beginning of the pavement slab replacement work area. The sign shall be in place during the entire curing period.

Paras 14, 15, 16, and 17 to be used when SC6-3(CA) or SC6-4(CA) signs are required for connector or ramp closure.

14

SC6-3(CA) (RAMP CLOSED) sign shall be used to inform motorists of the temporary closing of a connector, entrance ramp or exit ramp for 1 business day.

15

SC6-4(CA) (RAMP CLOSED) sign shall be used to inform motorists of the temporary closing of a connector, entrance ramp or exit ramp for more than 1 business day.

16

The SC6-3(CA) or SC6-4(CA) signs shall be installed at least 7 days before closing the connector or ramp, but not more than 15 days before the connector or ramp closure. The Contractor shall notify the Engineer at least 2 business days before installing the SC6-3(CA) or SC6-4(CA) signs.

17

Accurate information shall be maintained on the SC6-3(CA) or SC6-4(CA) signs. The SC6-3(CA) or SC6-4(CA) signs, when no longer required, shall be immediately covered or removed.

Para 18 and 19 to be edited by the District Traffic Manager or the District TMP Manager.

18

Freeways may be closed only if signed for closing 7 days in advance. The Contractor shall notify the Engineer not less than 5 business days prior to signing the freeway. If the freeway is not closed on the posted day, the closure shall be changed to allow a 3-business-day advance notice before closure.

19. Edit for project work.

Freeway closure charts are for the erection and removal of falsework, placement and removal of overhead sign bridges, and other work as approved in writing by the Engineer.

20*. Use on undivided highways as needed. Edit as directed by Traffic Operations for the type of operation which require stopping of traffic including erection of girders, falsework erection and removal, and time requirements. If delays of more than a few minutes are anticipated, advance warning and advisory signs must be erected in order for motorists to consider alternative routes.

During blasting, hauling, slide removal excavation operations, the road may be closed and public traffic stopped for periods not to exceed _____ hours _____ minutes. After one closure is made, accumulated traffic shall pass through the work before another closure is allowed.

Use Para 21, 22, or 23.

21. Use when personal vehicles of the Contractor's employees may be parked at various locations except on the traveled way or shoulders. Delete "or shoulders" as needed.

Personal vehicles of the Contractor's employees shall not be parked on the traveled way or shoulders including sections closed to public traffic.

22*. Use when personal vehicles of the Contractor's employees may be parked within the right of way but only within certain limits.

Personal vehicles of the Contractor's employees shall not be parked within the right of way except between _____ and _____.

23*. Use when personal vehicles of the Contractor's employees may be parked within the right of way but only at a designated area.

Personal vehicles of the Contractor's employees shall not be parked within the right of way except in the area _____.

Use Para 24 or 25.

24. Use when Standard Plan T-10 is included.

When work vehicles or equipment are parked within 6 feet of a traffic lane to perform active construction, the shoulder area shall be closed as shown on the plans.

25. Use when Standard Plan T-10 is not included.

When work vehicles or equipment are parked within 6 feet of a traffic lane to perform active construction, the shoulder area shall be closed with fluorescent orange traffic cones or portable delineators placed on a taper in advance of the parked vehicles or equipment and along the edge of the pavement at 25-foot intervals to a point not less than 25 feet past the last vehicle or piece of equipment. A minimum of 9 traffic cones or portable delineators shall be used for the taper. A W20-1 (ROAD WORK AHEAD) or W21-5b (RIGHT/LEFT SHOULDER CLOSED AHEAD) or C24(CA) (SHOULDER WORK AHEAD) sign shall be mounted on a crashworthy portable sign support with flags. The sign shall be placed where designated by the Engineer. The sign shall be a minimum of 48" x 48" in size. The Contractor shall immediately restore to the original position and location a traffic cone or delineator that is displaced or overturned, during the progress of work.

26*. Use for multilane roadways and undivided highways when lane requirement charts are not required because closures are allowed without restriction. A lane width of less than 10 feet must be justified. When a lane width of less than

10 feet is specified, add the following to the beginning of Para 26, "Regardless of the minimum lane width requirements specified in Section 7-1.09, "Public Safety," of the Standard Specifications,". Delete "paved" when project allows traffic to travel on unpaved surface.

A minimum of one paved traffic lane, not less than _____ feet wide, shall be open for use by public traffic in each direction of travel.

27*. Use for 2-lane, 2-way roadways and undivided highways if one-way traffic is OK and lane requirement charts are not required. A lane width of less than 10 feet must be justified. When a lane width of less than 10 feet is specified add the following to the beginning of Para 27 "Regardless of the minimum lane width requirements specified in Section 7-1.09, "Public Safety," of the Standard Specifications". Delete "paved" when project allows traffic to travel on unpaved surface.

A minimum of one paved traffic lane, not less than _____ feet wide, shall be open for use by public traffic.

28. Use only when there are time restrictions on the Contractor's operations.

If minor deviations from the lane requirement charts are required, a written request shall be submitted to the Engineer at least 15 days before the proposed date of the closure. The Engineer may approve the deviations if there is no significant increase in the cost to the State and if the work can be expedited and better serve the public traffic.

29*. Use when SSP 12-162 or SSP 12-170 is used. Fill in type of operations that require complete closure, such as bridge demolition, 2-post overhead sign structure installation and removal, erection of girders, falsework erection and removal, and loop detector installation.

When complete freeway, expressway or conventional highway closure is required, only one detour for each direction of travel will be allowed for the following operations: _____.

30. Use when closure of connectors with more than one lane is required along with closure of freeway lanes. Use ONLY for landscape, electrical or pavement delineation projects. Edit based on connector geometrics.

When closure of a connector is required along with the freeway lane closure, work on the connector shall be completed first, followed by work located in transitioning areas from the connector to the freeway lanes. At least one lane on the connector shall be open when the remaining work is located in the transitioning areas or on the freeway lanes.

31. When there is no item for CAS, replace "contract lump sum price paid for construction area signs" with "prices paid for the various contract items of work involved". Edit for applicable signs.

Full compensation for furnishing, erecting, maintaining, and removing and disposing of the C43(CA), SC6-3(CA), SC6-4(CA), W20-1, W21-5b, and C24(CA) signs shall be considered as included in the contract lump sum price paid for construction area signs and no additional compensation will be allowed therefor.

USE WITH 2006 STANDARDS.
Add charts to SSP 12-100.
Use for multilane highways. Edit chart title and use as many charts as needed.
Edits do not require approval by the SSP Owner, but must be verified by the District Traffic Manager.

Chart No. _
Freeway/Expressway Lane Requirements

County:	Route/Direction:	PM:

Closure Limits:

FROM HOUR TO HOUR	24	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	1	17	18	19	20	21	22	23	24
Mondays through Thursdays																									
Fridays																									
Saturdays																									
Sundays																									

Legend:

Delete [cut] any legend not used.
Do NOT use shading or crosshatching. The "Lane Requirement Chart" toolbar is no longer to be used. 1/2-hour increments can be accomplished by splitting the appropriate cell.
Edit for right or left shoulder closure. Do not edit if both shoulder closures apply.

1	Provide at least one through freeway lane open in direction of travel
2	Provide at least two adjacent through freeway lanes open in direction of travel
3	Provide at least three adjacent through freeway lanes open in direction of travel
4	Provide at least four adjacent through freeway lanes open in direction of travel
5	Provide at least five adjacent through freeway lanes open in direction of travel
S	Shoulder closure permitted (right / left)
N	No work permitted
	Work permitted within project right of way where shoulder or lane closure is not required.

REMARKS:

USE WITH 2006 STANDARDS.
Add charts to SSP 12-100.
Use for ramp closure. Edit chart title and use as many charts as needed. Use "Complete Ramp Closure Hours" as chart title for complete ramp closure. Use "Ramp Lane Requirements" as chart title for lane closure on ramp with multiple lanes. Specify in REMARKS detour route or reference to the applicable detour or traffic handling plans, if appropriate. Edits do not require approval by the SSP Owner, but must be verified by the District Traffic Manager.

Chart No. _
Complete Ramp Closure Hours/Ramp Lane Requirements

County:	Route/Direction:	PM:
Closure Limits:		

FROM HOUR TO HOUR	24	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	1	17	18	19	20	21	22	23	24
Mondays through Thursdays																									
Fridays																									
Saturdays																									
Sundays																									

Legend:

Delete [cut] any legend not used.
Do NOT use shading or crosshatching. The "Lane Requirement Chart" toolbar is no longer to be used. 1/2-hour increments can be accomplished by splitting the appropriate cell.
Edit for right or left shoulder closure. Do not edit if both shoulder closures apply.

1	Provide at least one ramp lane, not less than 11feet in width, open in direction of travel
2	Provide at least two adjacent ramp lanes open in direction of travel
C	Ramp may be closed completely
S	Shoulder closure permitted
N	No work permitted
	Work permitted within project right of way where shoulder or lane closure is not required.

REMARKS:

USE WITH 2006 STANDARDS.
Use on projects that allow lane closures. Use with "Maintaining Traffic" SSPs and either SSP 12-260, SSP 12-265, SSP 12-270 or SSP 12-275.

10-1.__ CLOSURE REQUIREMENTS AND CONDITIONS

Closures shall conform to the provisions in "Maintaining Traffic" of these special provisions and these special provisions.

2. Check with the District Traffic Manager to edit days of the week as appropriate. Add additional closure types as needed.

CLOSURE SCHEDULE

A written schedule of planned closures for the next week period, defined as Sunday noon through the following Sunday noon, shall be submitted by noon each Monday. A written schedule shall be submitted not less than 25 days and not more than 125 days before the anticipated start of any operation that will:

1. Reduce horizontal clearances, traveled way, including shoulders, to two lanes or less due to such operations as temporary barrier placement and paving
2. Reduce the vertical clearances available to the public due to such operations as pavement overlay, overhead sign installation, or falsework or girder erection

3

The Closure Schedule shall show the locations and times of the proposed closures. The Closure Schedule request forms furnished by the Engineer shall be used. Closure Schedules submitted to the Engineer with incomplete or inaccurate information will be rejected and returned for correction and resubmittal. The Contractor will be notified of disapproved closures or closures that require coordination with other parties as a condition of approval.

Para 4 may be deleted on conventional highways and freeways where the traffic demand is low enough that it is not necessary to restrict the Contractor's access during the week to accommodate a daily commute. Weekend and holiday restrictions are permitted.

4*. Edit the last sentence of Para 4 as necessary.

Closure Schedule amendments, including adding additional closures, shall be submitted by noon to the Engineer, in writing, at least 3 business days in advance of a planned closure. Approval of Closure Schedule amendments will be at the discretion of the Engineer.

5 Delete Paras 5, 6, 7, 8, 9, 10 and 11 for emergency Force Account contracts.

The Engineer shall be notified of cancelled closures 2 business days before the date of closure.

6

Closures that are cancelled due to unsuitable weather may be rescheduled at the discretion of the Engineer.

7

CONTINGENCY PLAN

A detailed contingency plan shall be prepared for reopening closures to public traffic. If required by "Beginning of Work, Time of Completion and Liquidated Damages" of these special provisions, the contingency plan shall be submitted to the Engineer before work at the job site begins. Otherwise, the contingency plan shall be submitted to the Engineer within one business day of the Engineer's request.

8

LATE REOPENING OF CLOSURES

If a closure is not reopened to public traffic by the specified time, work shall be suspended in conformance with the provisions in Section 8-1.05, "Temporary Suspension of Work," of the Standard Specifications. No further closures are to be made until the Engineer has accepted a work plan, submitted by the Contractor, that will insure that future closures will be reopened to public traffic at the specified time. The Engineer will have 2 business days to accept or reject the Contractor's proposed work plan. The Contractor will not be entitled to compensation for the suspension of work resulting from the late reopening of closures.

9*. Include if estimated damages equal or exceed $6,000 per hour for a mainline closure. Use for all connector closures. The District Traffic Operations Office will calculate the damages. The concurrence of the Regional or District Division Chief of Construction is required when damages are included. Edit the number and type of facilities as appropriate. Calculate damages as follows:

Mainline and Connector	**1st half hour:** **Use higher of a) 50% of the amount for 10-minute intervals or b) $1,000 per 10 minutes.** **2nd half hour:** **Use higher of a) 75% of the amount for 10-minute intervals or b) $1,000 per 10 minutes.** **2nd hour and beyond:** **Use amount for 10-minute intervals**	**Example:** **Amount = $18,000/hour based on traffic volumes over a 2-hour period** **1st half hour = $3,000/10 minutes x 50% = $1,500/10 minutes (> $1,000/10 minutes)** **2nd half hour = $3,000/10 minutes x 75% = $2,250/10 minutes (> $1,000/10 minutes)** **2nd hour and beyond = $3,000/10 minutes**

For each 10-minute interval, or fraction thereof past the time specified to reopen the closure, the Department will deduct the amount per interval shown below from moneys due or that may become due the Contractor under the contract. Damages are limited to 5 percent of project cost per occurrence and will not be assessed when the Engineer requests that the closure remain in place beyond the scheduled pickup time.

Type of Facility	Route or Segment	Period	Damages/interval ($)
Mainline		1st half hour 2nd half hour 2nd hour and beyond	$xx / 10 minutes $xx / 10 minutes $xx / 10 minutes
Connector		1st half hour 2nd half hour 2nd hour and beyond	$xx / 10 minutes $xx / 10 minutes $xx / 10 minutes

10

COMPENSATION

The Engineer shall be notified of delays in the Contractor's operations due to the following conditions, and if, in the opinion of the Engineer, the Contractor's controlling operation is delayed or interfered with by reason of those conditions, and the Contractor's loss due to that delay could not have been avoided by rescheduling the affected closure or by judicious handling of forces, equipment and plant, the delay will be considered a right of way delay and will be compensated in conformance with the provisions in Section 8-1.09, "Right of Way Delays," of the Standard Specifications:

1. The Contractor's proposed Closure Schedule is denied and his planned closures are within the time frame allowed for closures in "Maintaining Traffic" of these special provisions, except that the Contractor will not be entitled to compensation for amendments to the Closure Schedule that are not approved.
2. The Contractor is denied a confirmed closure.

11

Should the Engineer direct the Contractor to remove a closure before the time designated in the approved Closure Schedule, delay to the Contractor's schedule due to removal of the closure will be considered a right of way delay and compensation for the delay will be determined in conformance with the provisions in Section 8-1.09, "Right of Way Delays," of the Standard Specifications.

USE WITH 2006 STANDARDS.
Use for lane closures on multilane highways without moving lane closures.
When lane closures are required on both multilane and 2-lane, 2-way highways, use SSP 12-275 and add Para 4 of this SSP, except on seal coat projects.
NOTES: (1) Traffic Control System includes only those items shown on the Standard Plans. (2) Traffic Control System is almost always a separate contract item; however, Para 10 or Para 11 may be used to include Traffic Control System in other items of work when ALL work requires lane closures, e.g., pavement grooving, surfacing or pavement marker projects.
1. Use Paras 1 and 8 when lane closures do NOT include ramp closures. Delete Paras 2 and 9 when Paras 1 and 8 are used.

10-1.__ TRAFFIC CONTROL SYSTEM FOR LANE CLOSURE

A traffic control system shall consist of closing traffic lanes in conformance with the details shown on the plans, the provisions in Section 12, "Construction Area Traffic Control Devices," of the Standard Specifications, the provisions under "Maintaining Traffic" and "Construction Area Signs" of these special provisions, and these special provisions.

2. Use Paras 2 and 9 when lane closures include ramp closures. Delete Paras 1 and 8 when Paras 2 and 9 are used.

10-1.__ TRAFFIC CONTROL SYSTEM FOR LANE CLOSURE

A traffic control system shall consist of closing traffic lanes and ramps in conformance with the details shown on the plans, the provisions in Section 12, "Construction Area Traffic Control Devices," of the Standard Specifications, the provisions under "Maintaining Traffic" and "Construction Area Signs" of these special provisions, and these special provisions.

3

The provisions in this section will not relieve the Contractor from the responsibility to provide additional devices or take measures as may be necessary to comply with the provisions in Section 7-1.09, "Public Safety," of the Standard Specifications.

4

Each vehicle used to place, maintain and remove components of a traffic control system on multilane highways shall be equipped with a Type II flashing arrow sign which shall be in operation when the vehicle is being used for placing, maintaining or removing components. Vehicles equipped with Type II flashing arrow sign not involved in placing, maintaining or removing components when operated within a stationary lane closure shall only display the caution display mode. The sign shall be controllable by the operator of the vehicle while the vehicle is in motion. The flashing arrow sign shown on the plans shall not be used on vehicles which are being used to place, maintain and remove components of a traffic control system and shall be in place before a lane closure requiring its use is completed.

5. Use when closure of multiple lanes is required on freeways and expressways and the District wants to require continuous closure tapers without the 1,700-foot non-taper section between

tapers. Delete when the 1,700-foot non-tapered section is required.

The 1,700-foot section of lane closure, shown along lane lines between the 1,000-foot lane closure tapers on the plans entitled "Traffic Control System for Lane Closures on Freeways and Expressways" and "Traffic Control System for Lane and Complete Closures on Freeways and Expressways" shall not be used.

6. Use when lane closures are to be made on freeways and expressways and the District wants to omit the cones across closed lanes. Delete when cones across closed lanes are required.

The traffic cones shown to be placed transversely across closed traffic lanes and shoulders on the plans entitled "Traffic Control System for Lane Closures on Freeways and Expressways" and "Traffic Control System for Lane and Complete Closures on Freeways and Expressways" shall not be placed.

7

If components in the traffic control system are displaced or cease to operate or function as specified, from any cause, during the progress of the work, the Contractor shall immediately repair the components to the original condition or replace the components and shall restore the components to the original location.

8. Use Paras 1 and 8 when lane closures do not include ramp closures. Delete Paras 2 and 9 when Paras 1 and 8 are used.

When lane closures are made for work periods only, at the end of each work period, components of the traffic control system, except portable delineators placed along open trenches or excavation adjacent to the traveled way, shall be removed from the traveled way and shoulder. If the Contractor so elects, the components may be stored at selected central locations designated by the Engineer within the limits of the highway right of way.

9. Use Paras 2 and 9 when lane closures include ramp closures. Delete Paras 1 and 8 when Paras 2 and 9 are used.

When lane and ramp closures are made for work periods only, at the end of each work period, components of the traffic control system, except portable delineators placed along open trenches or excavation adjacent to the traveled way, shall be removed from the traveled way and shoulder. If the Contractor so elects, the components may be stored at selected central locations designated by the Engineer within the limits of the highway right of way.

10. Use only when all work requires lane closures and flaggers are shown on lane closure plans. Delete Paras 11, 12 and 13 when Para 10 is used.

Except for flagging costs, full compensation for providing the traffic control system shown on the plans (including signs) shall be considered as included in the contract prices paid for the various items of work and no separate payment will be made therefor. Flagging costs will be paid for as provided in Section 12-2.02, "Flagging Costs," of the Standard Specifications.

11. Use only when all work requires lane closures and flaggers are NOT shown on lane closure plans. Delete Paras 10, 12 and 13 when Para 11 is used.

Full compensation for providing the traffic control system shown on the plans (including signs) shall be considered as included in the contract prices paid for the various items of work and no separate payment will be made therefor.

12. Use when only portions of the work require lane closures and flaggers are shown on lane closure plans. Delete Paras 10, 11 and 13 when Para 12 is used.

The contract lump sum price paid for traffic control system shall include full compensation for furnishing all labor (except for flagging costs), materials (including signs), tools, equipment, and incidentals, and for doing all the work involved in placing, removing, storing, maintaining, moving to new locations, replacing, and disposing of the components of the traffic control system shown on the plans, as specified in the Standard Specifications and these special provisions, and as directed by the Engineer. Flagging costs will be paid for as provided in Section 12-2.02, "Flagging Costs," of the Standard Specifications.

13. Use when only portions of the work require lane closures and flaggers are NOT shown on lane closure plans. Delete Paras 10, 11 and 12 when Para 13 is used.

The contract lump sum price paid for traffic control system shall include full compensation for furnishing all labor, materials (including signs), tools, equipment, and incidentals, and for doing all the work involved in placing, removing, storing, maintaining, moving to new locations, replacing, and disposing of the components of the traffic control system shown on the plans, as specified in the Standard Specifications and these special provisions, and as directed by the Engineer.

14. Use only with Para 12 or Para 13.

The adjustment provisions in Section 4-1.03, "Changes," of the Standard Specifications shall not apply to the item of traffic control system. Adjustments in compensation for traffic control system will be made only for increased or decreased traffic control system required by changes ordered by the Engineer and will be made on the basis of the cost of the increased or decreased traffic control necessary. The adjustment will be made on a force account basis as provided in Section 9-1.03, "Force Account Payment," of the Standard Specifications for increased work and estimated on the same basis in the case of decreased work.

15. Include funds in the Engineer's Estimate under Supplemental Work for traffic control system.

Traffic control system required by work which is classed as extra work, as provided in Section 4-1.03D of the Standard Specifications, will be paid for as a part of the extra work.

USE WITH 2006 STANDARDS.
Use in ALL projects

10-1.__ TEMPORARY CRASH CUSHION MODULE

This work shall consist of furnishing, installing, and maintaining sand filled temporary crash cushion modules in groupings or arrays at each location shown on the plans, as specified in these special provisions or where designated by the Engineer. The grouping or array of sand filled modules shall form a complete sand filled temporary crash cushion in conformance with the details shown on the plans and these special provisions.

2

Temporary crash cushions shall be secured in place prior to commencing work for which the temporary crash cushions are required.

3

Whenever the work or the Contractor's operations establishes a fixed obstacle, the exposed fixed obstacle shall be protected with a sand filled temporary crash cushion. The sand filled temporary crash cushion shall be in place prior to opening the lanes adjacent to the fixed obstacle to public traffic.

4

Sand filled temporary crash cushions shall be maintained in place at each location, including times when work is not actively in progress. Sand filled temporary crash cushions may be removed during a work period for access to the work provided that the exposed fixed obstacle is 15 feet or more from a lane carrying public traffic and the temporary crash cushion is reset to protect the obstacle prior to the end of the work period in which the fixed obstacle was exposed. When no longer required, as determined by the Engineer, sand filled temporary crash cushions shall be removed from the site of the work.

5

Sand filled temporary crash cushion modules shall be one of the following, or equal, and be manufactured after March 31, 1997:

1. Energite III and Fitch Inertial Modules, manufactured by Energy Absorption Systems, Inc., 35 East Wacker Drive, Suite 1100, Chicago, IL 60601:

    1.1. Northern California: Traffic Control Service, Inc., 8585 Thys Court, Sacramento, CA 95828, telephone (800) 884-8274, FAX (916) 387-9734
    1.2. Southern California: Traffic Control Service, Inc., 1818 E. Orangethorpe, Fullerton, CA 92831-5324, telephone (800) 222-8274, FAX (714) 526-9501

2. TrafFix Sand Barrels, manufactured by TrafFix Devices, Inc., 220 Calle Pintoresco, San Clemente, CA 92672, telephone (949) 361-5663, FAX (949) 361-9205

    2.1. Northern California: United Rentals, Inc., 1533 Berger Drive, San Jose, CA 95112, telephone (408) 287-4303, FAX (408) 287-1929
    2.2. Southern California: Statewide Safety & Sign, Inc., P.O. Box 1440, Pismo Beach, CA 93448, telephone (800) 559-7080, FAX (805) 929-5786

3. CrashGard Model CC-48 Sand Barrels, manufactured by Plastic Safety Systems, Inc., 2444 Baldwin Road, Cleveland, OH 44104:

3.1. Northern California:

3.1.1. Capitol Barricade Safety & Sign, 6329 Elvas Ave, Sacramento, CA 95819, telephone (888) 868-5021, FAX (916) 451-5388

3.1.2. Sierra Safety, Inc., 9093 Old State Highway, New Castle, CA 95658, telephone (916) 663-2026, FAX (916) 663-1858

3.2. Southern California: Hi Way Safety Inc., 13310 5th Street, Chino, CA 91710, telephone (909) 591-1781, FAX (909) 627-0999

6. Do not change the color to be specified.

Modules contained in each temporary crash cushion shall be of the same type at each location. The color of the modules shall be the standard yellow color, as furnished by the vendor, with black lids. The modules shall exhibit good workmanship free from structural flaws and objectionable surface defects. The modules need not be new. Good used undamaged modules conforming to color and quality of the types specified herein may be utilized. If used Fitch modules requiring a seal are furnished, the top edge of the seal shall be securely fastened to the wall of the module by a continuous strip of heavy duty tape.

7

Modules shall be filled with sand in conformance with the manufacturer's directions, and to the sand capacity in pounds for each module shown on the plans. Sand for filling the modules shall be clean washed concrete sand of commercial quality. At the time of placing in the modules, the sand shall contain not more than 7 percent water as determined by California Test 226.

8

Modules damaged due to the Contractor's operations shall be repaired immediately by the Contractor at the Contractor's expense. Modules damaged beyond repair, as determined by the Engineer, due to the Contractor's operations shall be removed and replaced by the Contractor at the Contractor's expense.

9

Temporary crash cushion modules may be placed on movable pallets or frames. Comply with dimensions shown on the plans. The pallets or frames shall provide a full bearing base beneath the modules. The modules and supporting pallets or frames shall not be moved by sliding or skidding along the pavement or bridge deck.

10

A Type R or P marker panel shall be attached to the front of the crash cushion as shown on the plans, when the closest point of the crash cushion array is within 12 feet of the traveled way. The marker panel, when required, shall be firmly fastened to the crash cushion with commercial quality hardware or by other methods determined by the Engineer.

11

At the completion of the project, temporary crash cushion modules, sand filling, pallets or frames, and marker panels shall become the property of the Contractor and shall be removed from the site of the work. Temporary crash cushion modules shall not be installed in the permanent work.

Use either Para 12 or Paras 13, 14, 15, and 16.

12. Use when temporary crash cushions are not required by the work shown on the project plans and the only temporary crash cushions will be those required by "Public Safety".

Temporary crash cushion modules placed in conformance with Section 7-1.09, "Public Safety," of the Standard Specifications will not be measured nor paid for.

Use Paras 13, 14, 15, and 16 when items of work shown on the project plans require temporary crash cushions AND include a contract item.

13

Temporary crash cushion modules will be measured by the unit as determined from the actual count of modules used in the work or ordered by the Engineer at each location. Temporary crash cushion modules placed in conformance with Section 7-1.09, "Public Safety," of the Standard Specifications and modules placed in excess of the number specified or shown will not be measured nor paid for.

14

Repairing modules damaged by public traffic will be paid for as extra work as provided in Section 4-1.03D of the Standard Specifications. Modules damaged beyond repair by public traffic, when ordered by the Engineer, shall be removed and replaced immediately by the Contractor. Modules replaced due to damage by public traffic will be measured and paid for as temporary crash cushion module.

15

If the Engineer orders a lateral move of the sand filled temporary crash cushions and the repositioning is not shown on the plans, moving the sand filled temporary crash cushion will be paid for as extra work as provided in Section 4-1.03D of the Standard Specifications and these temporary crash cushion modules will not be counted for payment in the new position.

16

The contract unit price paid for temporary crash cushion module shall include full compensation for furnishing all labor, materials (including sand, pallets or frames and marker panels), tools, equipment, and incidentals, and for doing all the work involved in furnishing, installing, maintaining, moving, and resetting during a work period for access to the work, and removing from the site of the work when no longer required (including those damaged by public traffic) sand filled temporary crash cushion modules, complete in place, as shown on the plans, as specified in the Standard Specifications and these special provisions, and as directed by the Engineer.

USE WITH 2006 STANDARDS.
Insert in Section 10-1. DO NOT USE in Section 10-2.
Add plan and section details for rock blanket.

10-1.__ ROCK BLANKET

Rock blanket shall be placed as shown on the plans and in conformance with these special provisions.

2

MATERIALS

Rock for the rock blanket shall be clean, smooth rock obtained from a single source.

3

Rock shall conform to the following grading:

Screen Size (Inches)	Percentage Passing
8	100
6	50-85
4	0-50

4

A sample of the rock shall be submitted to the Engineer for approval prior to delivery of the rock to the project site.

5

Rock shall be secured in place with Class 2 concrete conforming to the provisions in Section 90, "Portland Cement Concrete," of the Standard Specifications and these special provisions. Concrete aggregate size shall be 3/4 inch maximum.

6. Use when roadside clearing is specified; otherwise delete.

SITE PREPARATION

Prior to beginning rock blanket work, areas to receive the rock blanket shall be cleared in conformance with the provisions in "Roadside Clearing" of these special provisions.

7. Use when roadside clearing is not specified; otherwise delete.

Areas to receive rock blanket shall be cleared of trash and debris. Weeds shall be removed to the ground level. Cleared trash, debris and removed weeds shall be disposed of in conformance with the provisions in Section 7-1.13, "Disposal of Material Outside the Highway Right of Way," of the Standard Specifications.

8. The depth of excavation MUST be shown on the detail.

After clearing, the areas shall be excavated to the depth shown on the plans, graded to a smooth uniform surface and compacted to a minimum relative compaction of 90 percent.

9. Use when soil sterilant is used.

After compaction, the areas shall be sterilized with dichlobenil. The sterilant shall be applied at the maximum label rate and shall not be applied more than 12 inches beyond the rock blanket

limits. Soil sterilant shall conform to the provisions in Section 20-4.026, "Pesticides," of the Standard Specifications, except recommendations from a licensed Pest Control Adviser will not be required.

10*. Edit as required.

PLACEMENT

Rock shall be placed while concrete is still plastic, and spaced a maximum of 1/2 inch apart. The Contractor shall remove concrete adhering to the exposed surfaces of the rock. Loose rocks, or rock with a gap greater than 3/8 inch, measured from the edge of the rock to the surrounding concrete bedding shall be reset at the Contractor's expense by methods determined by the Engineer. Rock blanket shall not be placed to within ___ feet of ground cover areas and other plants.

11

MEASUREMENT AND PAYMENT

Rock blanket will be measured by the square yard as determined from actual measurements made parallel to the ground slope.

12. Delete "furnishing and applying soil sterilant" if NO soil sterilant is applied.

The contract price paid per square yard for rock blanket shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals, and for doing all the work involved in placing rock blanket, complete in place, including furnishing and applying soil sterilant, as shown on the plans, as specified in the Standard Specifications and these special provisions, and as directed by the Engineer.

USE WITH 2006 STANDARDS.
Use irrigation sleeves ONLY under low use driveways and under sidewalks or AC between planters.
Insert in Section 10-1. DO NOT USE in Section 10-2.
Use Item Code 208310.

10-1.__ IRRIGATION SLEEVE

Irrigation sleeves shall be polyvinyl chloride (PVC) plastic pipe and shall conform to the provisions in Section 20-2.15B(1), "Plastic Pipe Supply Line," of the Standard Specifications and these special provisions.

2

Irrigation sleeves less than 6 inches in diameter shall have a pressure rating (PR) 315.

3

Irrigation sleeves 6 inches or larger in diameter shall be Schedule 40.

4

Fittings shall be Schedule 40.

5

Irrigation sleeves shall be installed where shown on the plans.

6

Irrigation sleeves shall be installed not less than 1.5 feet below finished grade measured to the top of the sleeve. Sleeves shall extend 6 inches beyond paving. The ends of the sleeve shall be capped until use.

7. Use Paras 7 and 8 for payment of Irrigation Sleeve. Always show as a separate bid item. Do NOT include in a Cost Break-Down

Quantities of irrigation sleeve to be paid will be determined from the slope length designated by the Engineer. Irrigation sleeve placed in excess of the lengths designated will not be paid for.

8

The contract price paid per linear foot for irrigation sleeve shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals, and for doing all the work involved in irrigation sleeve, complete in place, as shown on the plans, as specified in the Standard Specifications and these special provisions, and as directed by the Engineer.

USE WITH 2006 STANDARDS.
Insert after Section 10-1. Include SSPs 20-200 thru 20-930 in this Section 10-2.
Do NOT include erosion control, irrigation crossover, extend irrigation crossover, water supply lines (Bridge), rock blanket, decomposed granite or any roadway work in this Section 10-2.

SECTION 10-2 HIGHWAY PLANTING AND IRRIGATION SYSTEMS

10-2.01 GENERAL

The work performed in connection with highway planting and irrigation systems shall conform to the provisions in Section 20, "Erosion Control and Highway Planting," of the Standard Specifications and these special provisions.

2. Use only when the Contractor may need access to existing irrigation control equipment.

The Contractor shall notify the Engineer not less than 72 hours prior to requiring initial access to the existing irrigation controllers. When the Engineer determines that access to the controllers is required at other times, arrangements will be made to provide this access.

Use either Paras 3 & 4 OR Paras 3 & 5 when watering cannot be performed during normal hours due to fluctuations in water pressure or supply, otherwise delete all 3 paras. USE Paras 3 & 5 when Highway Planting is a lump sum pay item, use Paras 3 & 4 when it is not. [NEVER EDIT PARA 4 OR 5.]
3

When fluctuations of water pressure and water supply are encountered during normal working hours, plants shall be watered at other times, as often, and in sufficient amounts as conditions may require to keep the soil and plant roots moist during the life of the contract.

4.

Full compensation for watering plants outside normal working hours shall be considered as included in the contract unit prices paid for the plants involved and the contract lump sum price paid for plant establishment work and no additional compensation will be allowed therefor.

5

Full compensation for watering plants outside normal working hours shall be considered as included in the contract lump sum prices paid for highway planting and plant establishment work and no additional compensation will be allowed therefor.

Delete Paras 6 thru 10 when progress inspections are not required. "Progress inspections" should only be used as a District option.
6

PROGRESS INSPECTIONS

Progress inspections will be performed by the Engineer for completed highway planting and irrigation system work at designated stages during the life of the contract.

7

Progress inspections will not relieve the Contractor of responsibility for installation in conformance with the special provisions, plans and Standard Specifications. Work within an area shall not progress beyond each stage until the inspection has been completed, corrective work has been performed, and the work is approved, unless otherwise permitted by the Engineer.

8

The requirements for progress inspections will not preclude additional inspections of work by the Engineer at other times during the life of the contract.

9

The Contractor shall notify the Engineer, in writing, at least 4 working days prior to completion of the work for each stage of an area and shall allow a minimum of 3 working days for the inspection.

10. Delete items of work that will not be part of the contract and reletter the following items that remain.

Progress inspections will be performed at the following stages of work:

A. During pressure testing of the pipelines on the supply side of control valves.
B. During testing of low voltage conductors.
C. Before planting begins and after completion of the work specified for planting in Section 20-4.03, "Preparing Planting Areas," of the Standard Specifications.
D. Before plant establishment work begins and after completion of the work specified for planting in Section 20-4.05, "Planting," of the Standard Specifications.
E. At intervals of one month during the plant establishment period.

USE WITH 2006 STANDARDS.
Add to SSP 20-200.
1. Use if there is NO existing planting work, such as maintaining, removing, pruning or transplanting existing plants. Delete Paras 2 and 3.

10-2.02 (BLANK)

2. Use if SSP 15-010 is NOT USED and there is existing planting within the limits of work. Delete Paras 1 and 3.

10-2.02 EXISTING HIGHWAY PLANTING

In addition to the provisions in Section 20, "Erosion Control and Highway Planting," of the Standard Specifications, work performed in connection with existing highway planting shall conform to the provisions in Section 15, "Existing Highway Facilities," of the Standard Specifications and these special provisions.

3. Use if SSP 15-010 is USED and there is existing planting within the limits of work. Delete Paras 1 and 2.

10-2.02 EXISTING HIGHWAY PLANTING

In addition to the provisions in Section 20, "Erosion Control and Highway Planting," of the Standard Specifications, work performed in connection with existing highway planting shall conform to the provisions in "Existing Highway Facilities," of these special provisions.

USE WITH 2006 STANDARDS.
Use when existing planted areas are to be maintained and NOT paid for as extra work, except for pruning and correcting deficiencies. Add to SSP 20-250.
Plans: Existing planted areas MUST be shown on the plans. Show trees, shrubs and groundcover masses or use one bubble for each planted area. Add symbol to legend on the Plant List.
Use Item Code 204096, "Maintain Existing Planted Areas."

MAINTAIN EXISTING PLANTED AREAS

Existing planted areas, designated on the plans to be maintained, shall be maintained throughout the life of the contract in conformance with these special provisions.

2

Existing plants shall be watered in conformance with the provisions in Section 20-4.06, "Watering," of the Standard Specifications.

3

Existing planted areas to be maintained shall be inspected for deficiencies by the Contractor in the presence of the Engineer. Deficiencies requiring corrective action shall include weeds; dead, diseased, or unhealthy plants; missing plant stakes and tree ties; inadequate plant basins; and other deficiencies needing corrective action to promote healthy plant life. The inspection shall be completed within 15 days after the start of work.

4. Include funds in the Engineer's Estimate under Supplemental Work for correction of deficiencies.

Deficiencies found during the inspection shall be corrected within 15 days after the inspection ends. Correction of deficiencies, as directed by the Engineer, will be paid for as extra work in conformance with the provisions in Section 4-1.03D, "Extra Work," of the Standard Specifications.

5. Use when pruning is required and SSP 20-254 is NOT used. Include funds in the Engineer's Estimate under Supplemental Work for pruning.

When directed by the Engineer, existing plants shall be pruned and the work will be paid for as extra work in conformance with the provisions in Section 4-l.03D, "Extra Work," of the Standard Specifications.

6. Edit as required.

After deficiencies have been corrected, the Contractor shall perform work to maintain existing planted areas in a neat appearance and to promote healthy plant growth. The work shall include the following:

A. Weeds shall be killed before the weeds reach the seed stage of growth or exceed 6 inches in length.
B. Weeds shall be removed from existing planted areas. Weeds shall be killed prior to removal. Weed removal in ground cover areas shall extend beyond the outer limits of ground cover areas to the adjacent edges of paving, fences and proposed plants and planting areas, and a 6-foot diameter area centered at each existing tree and shrub outside of existing ground cover areas.

C. When a portion of a new automatic irrigation system is completed, the existing plants to be watered by that portion of the irrigation system shall be watered automatically.

D. Pesticides for maintaining existing planted areas shall conform to the provisions in "Pesticides" of these special provisions.

Delete when plant basins are no longer required.

E. Existing plant basins shall be kept well-formed and free of silt. If existing plant basins require repairs, and the plant basins contain mulch, the mulch shall be replaced after the plant basins have been repaired.

7. This pay clause MUST be used on Highway Planting Projects and Highway Construction Projects with highway planting. On Highway Construction Projects show as a separate bid item in the Engineers Estimate and NOT in the Highway Planting Cost Break-Down SSP.

The contract lump sum price paid for maintain existing planted areas shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals, and for doing all the work involved in maintain existing planted areas, complete in place, as shown on the plans, as specified in the standard specifications and these special provisions, and as directed by the Engineer.

USE WITH 2006 STANDARDS.
Use Item Code 204031, "Transplant Palm Tree."
Paras 5 & 16 may place restrictions on when projects containing this SSP can be advertised.
Paras 1 & 2, use for Highway Construction projects and add to Section 10-1. Delete Para 3 when Paras 1 & 2 are used.

10-1.__ TRANSPLANT PALM TREES

Transplanting palm trees shall conform to the provisions in Section 20-4, "Highway Planting," of the Standard Specifications and these special provisions.

2. Edit as required to fit the project.

Palm trees to be transplanted shall be removed and either stored or transplanted at the new locations prior to performing other work within the location of the palm trees.

3. Use for Highway Planting projects and add SSP 20-250 in Section 10-2. Delete Paras 1 & 2 when Para 3 is used.

TRANSPLANT PALM TREES

Palm trees to be transplanted shall be removed and stored or transplanted to the locations shown on the plans in conformance with the provisions in Section 20-4, "Highway Planting," of the Standard Specifications and these special provisions.

4

When the palm trees are removed and the work within the areas to which the trees are to be transplanted is not completed to the stage at which the trees can be planted, the trees shall be stored and maintained until transplanting can be completed. In other cases, the palm trees shall be planted at the new locations the same day the palm trees are removed.

5

Transplanting palm trees shall be performed between March 15 and October 15 unless otherwise directed by the Engineer.

6

Before each palm tree is planted, dead fronds and frond stubs shall be removed from the trunk. In addition, green fronds shall be removed up to 2 rows of fronds away from the center growth. The 2 remaining rows of fronds shall be tied in an upright position with light hemp or manila rope. Fronds and frond stubs for Phoenix dactylifera (Date Palm) shall be removed approximately 4 inches from the trunk. Other fronds and frond stubs shall be removed at the trunk in a manner that will not injure the tree trunk.

7

The roots of each palm tree or clump of palm trees shall be balled in a manner approved by the Engineer. Approval shall be obtained before removing any palm tree to be transplanted. The diameter and depth of each root ball shall be a minimum of 8 inches larger than the trunk diameter at the ground line. Exposed root balls shall be kept covered with wet burlap or canvas until the trees are planted.

8

Holes resulting from the removal of transplanted palm trees shall be backfilled the same day the trees are removed. Soil from the surrounding area may be used to backfill the holes. The backfill shall be mounded slightly above the surrounding ground level.

9

Palm trees shall not be dragged during transplanting operations and the trunks shall be protected from injury.

10

Each planting hole shall conform to the details shown on the plans.

11. Make sure that plans show detail for placement of commercial fertilizer (packet).

Commercial fertilizer (packet) shall be slow or controlled release and shall be in a biodegradable packet form. The packet shall gradually release nutrients over a 12-month period. Each packet shall have a weight of 10 g ± 1 g and shall have the following guaranteed chemical analysis:

Ingredient	Percentage
Nitrogen	20
Phosphoric Acid	10
Water Soluble Potash	5

12

Backfill material for the palm tree planting holes shall be 100 percent washed plaster sand.

13

After the planting holes have been backfilled, water shall be applied to the full depth of the backfill soil.

14. Show details of watering basins on the plans or add the necessary requirements to Para 14.

Watering basins for the transplanted palm trees shall be constructed as shown on the plans.

15

When the palm trees are planted, a root stimulant, approved by the Engineer, shall be applied to the roots of each palm tree in conformance with the printed instructions of the root stimulant manufacturer. A copy of the printed instructions shall be furnished to the Engineer before applying a stimulant. Root stimulant to be used shall be submitted to the Engineer not less than 2 weeks prior to the stimulant's intended use. Root stimulants not approved by the Engineer shall not be used.

16*. Edit as required for working days.

Palm trees to be transplanted shall be maintained by the Contractor from the time the palm trees are removed to the time of acceptance of the contract, provided however, that the contract will not be accepted unless the trees have been satisfactorily maintained for at least ___ working days after transplanting has been completed. The palm trees shall be watered as necessary to maintain the trees in a healthy condition. Trash, debris and weeds within the basins, including the basin walls, shall be removed and disposed of in conformance with the provisions in Section 7-1.13, "Disposal of Material Outside the Highway Right of Way," of the Standard Specifications. Weeds shall be removed before the weeds exceed 2 inches in length. Pesticides to be used for weed control shall be submitted to the Engineer not less than 2 weeks prior to the pesticide's intended use. Pesticides not approved by the Engineer shall not be used.

17

The provisions specified in Section 20-4.07, "Replacement," of the Standard Specifications for the replacement of unsuitable plants shall apply to transplanted palm trees. The replacement palm tree for each unsuitable transplanted palm tree shall be the same size and species as the palm tree being replaced. Each replacement palm tree shall be planted in the planting hole of the

unsuitable palm tree which the new tree is replacing. The method for planting replacement palm trees shall be as specified in this section for transplanting palm trees. Removed unsuitable transplanted palm trees shall be disposed of in conformance with the provisions in Section 7-1.13, "Disposal of Material Outside the Highway Right of Way," of the Standard Specifications.

18. Edit if paid for on a lump sum basis.

The quantity of transplant palm trees will be measured by the unit as determined from actual count in place.

19. Edit for lump sum price if required.

The contract unit price paid for transplant palm tree shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals, and for doing all the work involved in transplanting palm trees, complete in place, as shown on the plans, as specified in the Standard Specifications and these special provisions, and as directed by the Engineer.

USE WITH 2006 STANDARDS.
Add to SSP 20-200.
1. Use if there is NO existing irrigation facility located within the limits of work. Delete Paras 2, 3 & 4.

10-2.03 (BLANK)

2. Use if SSP 15-010 is NOT USED and there is an existing irrigation facility located within the limits of work. Delete Paras 1 & 3.

10-2.03 EXISTING HIGHWAY IRRIGATION FACILITIES

The work performed in connection with the various existing highway irrigation system facilities shall conform to the provisions in Section 15, "Existing Highway Facilities," of the Standard Specifications and these special provisions.

3. Use if SSP 15-010 is USED and there is an existing irrigation facility located within the limits of work. Delete Paras 1 & 2.

10-2.03 EXISTING HIGHWAY IRRIGATION FACILITIES

The work performed in connection with the various existing highway irrigation system facilities shall conform to the provisions in "Existing Highway Facilities," of these special provisions.

4

Water shall be maintained in conformance with the provisions in Section 20-5.025, "Maintain Existing Water Supply," of the Standard Specifications.

USE WITH 2006 STANDARDS.
Add to SSP 20-300 when required.

LOCATE EXISTING CROSSOVERS AND CONDUITS

Existing crossovers and conduits shown on the plans to be incorporated in the new work shall be located in conformance with the provisions for locating conduits in Section 20-5.03B, "Conduit for Irrigation Crossovers," of the Standard Specifications.

2

Unless otherwise directed by the Engineer, existing crossovers and conduits shown on the plans to be incorporated in the new work shall be located prior to performing work on irrigation systems.

3

If debris is encountered in the ends of conduits, the debris shall be removed prior to performing other work in the conduits. Removal of debris within the first 3 feet in these conduits shall be at the Contractor's expense. If debris is encountered in the conduits more than 3 feet from the ends of the conduits, the additional debris shall be removed as directed by the Engineer and the removal work will be paid for as extra work as provided in Section 4-1.03D,"Extra Work," of the Standard Specifications.

USE WITH 2006 STANDARDS.
Add to SSP 20-300.
1. Use for Highway Construction projects. Delete Para 2.

CHECK AND TEST EXISTING IRRIGATION FACILITIES

Existing irrigation facilities that are to remain or to be relocated, and that are within those areas where clearing and grubbing or earthwork operations are to be performed, shall be checked for missing or damaged components and proper operation prior to performing clearing and grubbing or earthwork operations. Existing irrigation facilities outside of work areas that are affected by the construction work shall also be checked for proper operation.

2. Use for Highway Planting projects. Delete Para 1.

CHECK AND TEST EXISTING IRRIGATION FACILITIES

Existing irrigation facilities that are to remain or to be relocated, and that are to be part of the new irrigation system, shall be checked for missing or damaged components, and for proper operation prior to performing irrigation system work.

3

A written list of existing irrigation system deficiencies shall be submitted to the Engineer within 5 working days after checking the existing facilities.

4. Include funds in the Engineer's Estimate under Supplemental Work for corrective work.

Deficiencies found during checking of the existing facilities shall be corrected as directed by the Engineer. Corrective work ordered by the Engineer will be paid for as extra work as provided in Section 4-1.03D, "Extra Work," of the Standard Specifications.

Use Paras 5 & 6 when existing backflow preventers are on the project.

5

When existing irrigation facilities are checked, existing backflow preventers shall be tested for proper operation in conformance with the provisions in Section 20-5.03J, "Check and Test Backflow Preventers," of the Standard Specifications.

6

Existing backflow preventers shall be retested one year after the satisfactory completion of the previous test, and each year thereafter until the plant establishment period is completed. An additional test shall be provided not more than 10 days prior to acceptance of the contract.

7

Length of watering cycles for use of potable water from water meters for checking or testing existing irrigation facilities shall be as determined by the Engineer.

8. Use when SSP 15-740 is used. Include funds in the Engineer's Estimate under Supplemental Work for repair existing irrigation systems.

Additional repairs required for the existing irrigation system as ordered by the Engineer, except as otherwise provided for in "Existing Highway Irrigation Facilities" of these special provisions, will be paid for as extra work as provided in Section 4-1.03D, "Extra Work," of the Standard Specifications.

9. Use when SSP 20-305 is used. Include funds in the Engineer's Estimate under Supplemental Work for repair existing irrigation systems.

Additional repairs required for the existing irrigation system as ordered by the Engineer, except as otherwise provided for in "Maintain Existing Irrigation Facilities" of these special provisions, will be paid for as extra work as provided in Section 4-1.03D, "Extra Work," of the Standard Specifications.

10. Use on Highway Planting projects. Delete on Highway Construction projects and include "Check and Testing Existing Irrigation Facilities" in the cost break-down of SSP 20-201 or SSP 20-202.

Full compensation for checking and testing existing irrigation facilities, including testing existing backflow preventers, shall be considered as included in the contract prices paid per linear foot for the various sizes of plastic pipe (supply line) involved and no additional compensation will be allowed therefor.

USE WITH 2006 STANDARDS.
Add to SSP 20-300.
Use item code 206401, "Maintain Existing Irrigation Facilities."
1. Include SSP 20-304 in Section 10-2 when the second sentence in Para 1 is used.

MAINTAIN EXISTING IRRIGATION FACILITIES

Existing irrigation facilities shall be maintained throughout the life of the contract. Prior to the start of maintaining existing irrigation facilities work, the facilities shall be checked for proper operation, and repaired in conformance with the provisions in "Check and Test Existing Irrigation Facilities" of these special provisions.

2. Include SSP 20-304.

After the existing facilities have been checked and repaired, the Contractor shall be responsible for the routine maintenance of existing irrigation systems. The work shall include, but not limited to, checking irrigation systems for proper operation and adjusting, repairing or replacing valves, valve boxes, sprinklers, risers, swing joints, wye strainers, valve assembly units, and filter assembly units.

3

The Contractor will not be responsible for maintaining existing water meters, underground pipe supply lines, control and neutral conductors, and electrical conduits. Except as otherwise specified in "Existing Highway Irrigation Facilities" of these special provisions, repair work to these facilities ordered by the Engineer will be paid for as extra work as provided in Section 4-l.03D, "Extra Work," of the Standard Specifications.

4

Existing automatic irrigation systems shall be operated automatically during the life of the contract, except manual operation will be allowed for the work during plant replacement, fertilization, weed germination, and the repair of irrigation facilities.

5

Irrigation controllers shall be programmed by the Contractor for seasonal water requirements. During winter seasons irrigation systems shall be operated automatically a minimum of 2 minutes every 2 weeks.

6

Irrigation systems and facilities shall be checked for proper operation at least once every 30 days. When required, as determined by the Engineer, adjusting, repairing or replacing irrigation facilities shall be completed within 5 working days after checking the irrigation systems. Except as provided in these special provisions, repair and replacement of irrigation facilities shall conform to the provisions in "Existing Highway Irrigation Facilities" of these special provisions.

7. Use on Highway Construction and Highway Planting projects. When SSP 20-201 or 20-202 is used, do not include in the Irrigation System Cost Break-Down. Show as a separate contract item.

Except as provided in these special provisions, the contract lump sum price paid for maintain existing irrigation facilities shall include full compensation for furnishing all labor, materials,

tools, equipment, and incidentals, and for doing all the work involved in maintaining existing irrigation facilities, complete in place, including checking irrigation facilities, as shown on the plans, as specified in the Standard Specifications and these special provisions, and as directed by the Engineer.

USE WITH 2006 STANDARDS.
Section 10-2.04: LEAD SSP. Add to SSP 20-200.
1. Use when no Highway Planting is involved and delete Paras 2 and 3.

10-2.04 (BLANK)

2. Use when Highway Planting is involved and delete Para 1.

10-2.04 HIGHWAY PLANTING

The work performed in connection with highway planting shall conform to the provisions in Section 20-4, "Highway Planting," of the Standard Specifications and these special provisions.

3. Use when material special provisions are required. Add the applicable SSPs & special provisions for the required planting materials to Para 3. Include only material special provisions.

HIGHWAY PLANTING MATERIALS

USE WITH 2006 STANDARDS.
Use Paras 1 to 3 only on roadway construction projects without highway planting and included in Section 10-1, otherwise delete Paras 1-3 and insert this SSP in Section 10-2 and add to SSP 20-350.
Use Item Code 202011, "Mulch" for roadway construction projects without highway planting and highway planting projects.

10-1.__ MULCH

This work includes spreading mulch on embankment slopes, excavation slopes, and areas shown on the plans.

Mulch must comply with Section 20-3, "Erosion Control," of the Standard Specifications.

2. Use only when SSP 20-020 "Move-in/Move-out (Erosion Control)" is included in project and delete Para 3.

Apply mulch when an area is ready to receive it as determined by the Engineer and in conformance with the provisions in "Move-in/Move-out (Erosion Control)" of these special provisions.

3. Use when Para 2 is deleted.

If the slope on which the mulch is to be placed is finished during the rainy season as specified in "Water Pollution Control" of these special provisions, apply mulch immediately to the slope.

MATERIALS

Use Paras 4 thru 11 to specify type of mulch material and delete remaining Paras.
Add to SSP 20-350 if Paras 1 thru 3 are deleted and delete "Materials."
4. Use Para 4 if green material is required.

Mulch

Mulch must be green material and must comply with the following:

1. The mulch provider must be a compost producer and a participant in the United States Composting Council (USCC) Seal of Testing Assurance (STA) program.
2. The green material producer must be fully permitted as a compost producer in accordance with requirements of the California Integrated Waste Management Board (CIWMB), Local Enforcement Agencies (LEA) and any other State and Local Agencies that regulate solid waste facilities. If exempt from State permitting requirements, the composting facility must certify that it follows all guidelines and procedures for production of compost meeting the environmental health standards of Title 14, California Code of Regulations, Division 7, Chapter 3.1, Article 7.
3. Green material may be derived from any single or mixture of chipped, shredded, or ground vegetation; or clean processed recycled wood products.

4. Compost green materials such that weed seeds, pathogens and deleterious materials are reduced as specified under Title 14, California Code of Regulations, Division 7, Chapter 3.1, Article 7, Section 17868.3.
5. Green material must not contain paint, petroleum products, herbicides, fungicides or other chemical residues harmful to animal life or plant growth. Compost must possess no objectionable odors.
6. Metal concentrations in green material must not exceed the maximum metal concentrations listed in Title 14, California Code of Regulations, Division 7, Chapter 3.1, Section 17868.2.
7. Green material must comply with the following table:

Physical and Chemical Requirements		
Property	Test Method	Requirement
pH	TMECC 04.11-A Elastometric pH 1:5 Slurry Method pH Units	6.0–8.5
Soluble Salts	TMECC 04.10-A Electrical Conductivity 1:5 Slurry Method dS/m (mmhos/cm)	0–10.0
Moisture Content	TMECC 03.09-A Total Solids & Moisture at 70+/- 5 deg C % Wet Weight Basis	N/A
Organic Matter Content	TMECC 05.07-A Loss-On-Ignition Organic Matter Method (LOI) % Dry Weight Basis	30–100
Maturity	TMECC 05.05-A Germination and Vigor Seed Emergence Seedling Vigor % Relative to Positive Control	 N/A N/A
Stability	TMECC 05.08-B Carbon Dioxide Evolution Rate mg CO_2-C/g OM per day	N/A
Particle Size	TMECC 02.02-B Sample Sieving for Aggregate Size Classification % Dry Weight Basis	Inches % Passing 3 99% 3/8 < 25% Max. Length 4 inches
Pathogen	TMECC 07.01-B Fecal Coliform Bacteria < 1000 MPN/gram dry wt.	Pass
Pathogen	TMECC 07.01-B Salmonella < 3 MPN/4 grams dry wt.	Pass
Physical Contaminants	TMECC 02.02-C Man Made Inert Removal and Classification: Plastic, Glass and Metal % > 4mm fraction	Combined Total: < 1.0
Physical Contaminants	TMECC 02.02-C Man Made Inert Removal and Classification: Sharps (Sewing needles, straight pins and hypodermic needles) % > 4mm fraction	None Detected

NOTE: TMECC refers to "Test Methods for the Examination of Composting and Compost," published by the United States Department of Agriculture and the United States Compost Council (USCC).

8. Before mulch application, submit a copy of the green material producer's Compost Technical Data Sheet and a copy of the compost producers STA certification. The Compost Technical Data Sheet must include laboratory analytical test results, directions for product use, and a list of product ingredients.
9. Before mulch application, submit a Certificate of Compliance under Section 6-1.07, "Certificates of Compliance," of the Standard Specifications.

5

Mulch must be tree bark.

6

Mulch must be wood chips.

7

Mulch must be shredded bark.

8

Mulch must consist of either wood chips or tree bark or a combination of both.

9

Mulch must be wood chips. Wood chips produced from tree trimmings may contain leaves and small twigs.

Paras 10 and 11, use when mulch for basins is different than mulch for mulch areas, otherwise delete. Edit Paras 10 and 11 to specify required materials and delete remaining Paras except Para 4 if green material is required.

10

Mulch for plant basins must be green material, tree bark, wood chips, shredded bark or either wood chips or tree bark or a combination of both. Wood chips produced from tree trimmings may contain leaves and small twigs.

11

Mulch for mulch areas must be green material, tree bark, wood chips, shredded bark or either wood chips or tree bark or a combination of both. Wood chips produced from tree trimmings may contain leaves and small twigs.

CONSTRUCTION

Application

Use Paras 12 thru 14 only on roadway construction projects without highway planting and included in Section 10-1, otherwise delete Paras 12 thru 14.

12. Show mulched areas on the plans with quantities in cubic yards.

Spread mulch to a uniform thickness. Extend mulch to the edge of retaining walls, dikes, paving and to within 4 feet from the flow line of paved and unpaved drainage ditches.

MEASUREMENT AND PAYMENT

13

Quantities of mulch will be measured by the cubic yard in the vehicle at the point of delivery.

The contract price paid per cubic yard for mulch includes full compensation for furnishing all labor, materials, tools, equipment, and incidentals and for doing all the work involved in providing mulch complete in place, as specified in the Standard Specifications and these special provisions, and as directed by the Engineer.

USE WITH 2006 STANDARDS.
Add to SSP 20-350.
1*. Use when granular fertilizer is required, but not the slow or controlled release type. Insert chemical analysis percentage for each ingredient.

Commercial Fertilizer (Granular)

Commercial fertilizer (granular) shall be a pelleted or granular form and shall fall within 20 percent of the following guaranteed chemical analysis:

Ingredient	Percentage
Nitrogen	
Phosphoric Acid	
Water Soluble Potash	

2. Use when slow or controlled release granular fertilizer is required.

Commercial Fertilizer (Slow Release)

Commercial fertilizer (slow release) shall be a pelleted or granular form, shall be slow or controlled release with a nutrient release over an 8-month to 12-month period, and shall fall within the following guaranteed chemical analysis range:

Ingredient	Percentage
Nitrogen	16-21
Phosphoric Acid	6-8
Water Soluble Potash	4-10

3. Use when slow or controlled release fertilizer packets are required.

Commercial Fertilizer (Packets)

Commercial fertilizer (packet) shall be slow or controlled release and shall be in a biodegradable packet form. The packet shall gradually release nutrients over a 12-month period. Each packet shall have a weight of 10 g ± 1 g and shall have the following guaranteed chemical analysis:

Ingredient	Percentage
Nitrogen	20
Phosphoric Acid	10
Water Soluble Potash	5

USE WITH 2006 STANDARDS.
Add to SSP 20-350. If the District requires the killed weeds to be removed, add the provisions to the appropriate Paras.
1. Use for trash and debris removal within the entire limits of the project. Edit for exceptions as required. Delete "mulch areas," and "and wild flower seeding areas," if not required.

ROADSIDE CLEARING

Before preparing planting areas, mulch areas, and wild flower seeding areas, or commencing irrigation trenching operations for planting areas, trash and debris shall be removed from the entire highway right of way within the project limits as required under Construction Site Management of these special provisions.

2. Use for trash and debris removal only within proposed planting areas. Edit for exceptions as required. Delete "and wild flower seeding areas," if not required. Delete "or to be maintained" if SSP 20-251 and SSP 20-252 are not used. Use the last sentence of Para 2 when trash and debris removal needs to be limited, such as large areas of unplanted right of way, otherwise delete.

ROADSIDE CLEARING

Before preparing planting areas and wild flower seeding areas, or commencing irrigation trenching operations for planting areas, trash and debris shall be removed from these areas as required under Construction Site Management of these special provisions.

3

The project area shall be cleared as specified herein:

3A. Use when plants are to be removed, otherwise delete.

A. Existing plants, where shown on the plans to be removed, shall be removed.

3B. Use when the Contractor is to be provided with the option of reducing removed trees and shrubs to chips and disposing of the chips within the project limits. If the green material used is mulch, delete placement provisions.

B. At the option of the Contractor, removed trees and shrubs may be reduced to chips. Chipped material shall be spread within the project limits at locations designated by the Engineer. Chipped material shall not be substituted for mulch, nor shall the chipped material be placed within areas to receive mulch.

3C. Use when the entire right of way is to be cleared, including surfaced areas. Edit as required. Delete Paras 3D thru 3L when Para 3C is used.

C. Weeds shall be killed and removed within the entire highway right of way, within the project limits, except for existing planting areas to be maintained, and including median areas, new and existing pavement, curb, sidewalk and other surfaced areas.

3D. Use when the entire right of way is to be cleared, excluding surfaced areas. Edit as required. Delete Paras 3C & Paras 3E thru 3L when Para 3D is used.

D. Weeds shall be killed and removed within the entire highway right of way, within the project limits, except for existing planting areas to be maintained, and excluding median areas, new and existing pavement, curb, sidewalk and other surfaced areas.

3E. Use when ground cover areas are to be cleared. Delete Paras 3C & 3D when Para 3E is used.

E. Weeds shall be killed and removed within proposed ground cover areas and within the area extending beyond the outer limits of the proposed ground cover areas to the adjacent edges of shoulders, dikes, curbs, sidewalks, walls, existing planting and fences. At those locations where proposed ground cover areas are 12 feet or more from the adjacent edges of shoulders, dikes, curbs, sidewalks, walls, and fences, the clearing limit shall be 6 feet beyond the outer limits of the proposed ground cover areas.

3F. Use when mulched areas are to be cleared. Delete Paras 3C & 3D when Para 3F is used. Delete "and removed" if a granular preemergent under mulched is not required.

F. Weeds shall be killed and removed within proposed mulch areas and within the area extending beyond the outer limits of the proposed mulch areas to the adjacent edges of shoulders, dikes, curbs, sidewalks, walls, existing planting and fences. At those locations where proposed mulch areas are 12 feet or more from the adjacent edges of shoulders, dikes, curbs, sidewalks, walls, and fences, the clearing limit shall be 6 feet beyond the outer limits of the proposed mulch areas.

3G. Use only in District 04 projects. Delete Paras 3C & 3D when Para 3G is used.

G. Weeds shall be killed and removed within 2 feet of the edges of paved shoulders, dikes, curbs and sidewalks.

3H. Delete Paras 3C & 3D when Para 3H is used.

H. Weeds shall be killed and removed within planting areas where plants are to be planted in groups or rows 15 feet or less apart and from within an area extending 6 feet beyond the outer limits of the groups or rows of plants.

3I. Delete Paras 3C & 3D when Para 3I is used.

I. Weeds shall be killed and removed within an area 6 feet in diameter centered at each plant location where the plants are to be planted more than 15 feet apart and are located outside of ground cover areas.

3J. Use for liner and seedling plants. Delete Paras 3C & 3D when Para 3J is used.

J. Weeds shall be killed and removed within an area 2 feet in diameter centered at each liner or seedling plant location where the plants are planted more than 10 feet apart. At locations where liner or seedling plants are to be planted less than 10 feet apart, weeds shall be killed and removed within the entire area.

3K. Edit for specific paved, graveled or decomposed granite areas. Delete Paras 3C & 3D when Para 3K is used.

K. Weeds shall be killed and removed from within areas where asphalt concrete surfacing, portland cement concrete surfacing, rock blankets, graveled or decomposed granite areas are to be placed, and from within unpaved gore areas between the edge of pavement and planting areas as shown on the highway planting plans.

3L. Use Paras 3N, 4F, 5D, 5E & 5F when mowing is required. Delete Paras 3C & 3D when Para 3L is used.

L. Weeds outside of mulched areas, plant basins, and ground cover shall be controlled by mowing. Limits of mowing shall extend from the weeds to be killed areas out to the edges of pavement, dikes, curbs, sidewalks, and fences.

M. Existing ground cover shall be killed and removed from within an area 6-foot in diameter centered at each proposed plant location within existing ground cover areas.

3N. Use when areas to be seeded are mowed. Delete Para 3N and edit Paras 1 & 2 & Para 4C when wild flower seeding is not required.

N. Roadside clearing for wild flower seeding areas shall also consist of mowing weeds in the areas to be seeded until the start of the wild flower seeding operation.

3O

O. Disposal of weeds killed during the initial roadside clearing will not be required, unless otherwise directed by the Engineer. When directed by the Engineer, killed weeds shall be disposed of and the disposal will be paid for as extra work as provided in Section 4-1.03D of the Standard Specifications.

4

After the initial roadside clearing is complete, additional roadside clearing work shall be performed as necessary to maintain the areas, as specified above, in a neat appearance until the start of the plant establishment period. This work shall include the following:

A. Trash and debris shall be removed.

B. Rodents shall be controlled.

4C. Delete"...except for weeds in wild flower seeding areas" when wild flower seeding areas are NOT required.

C. Weed growth shall be killed before the weeds reach the seed stage of growth or exceed 6 inches in length, whichever occurs first, except for weeds in wild flower seeding areas to be mowed.

D. Existing ground cover shall be killed and removed from within the 6-foot diameter areas specified for each proposed plant location within the existing ground cover areas.

E. Weeds in plant basins, including basin walls, shall be removed by hand pulling, after the plants have been planted.

4F. Use when mowing is required outside the areas to be cleared. Use with Para 3L, otherwise delete.

F. Areas outside the areas specified to be cleared of weeds shall be mowed.

5

Weed Control

Weed control shall also conform to the following:

5A. Delete when Para 1 of SSP 20-430 is used.

A. Stolon type weeds shall be killed with glyphosate.

5B. Use when tumbleweeds are anticipated in the project.

B. Tumbleweeds shall be removed by hand pulling before the tumbleweeds reach a height of 6 inches.

5C. Use with Paras 3K, 3L, 4D & 5B, otherwise delete.

C. Removed weeds and ground cover shall be disposed of outside the highway right of way in conformance with the provisions in Section 7-1.13, "Disposal of Material Outside the Highway Right of Way," of the Standard Specifications.

5D. Use when the application of growth regulators is permitted in areas where weeds are to be controlled by mowing.

D. At the option of the Contractor, weed growth in mowed areas may be controlled by growth regulators. Growth regulators shall be applied before weeds exceed 12 inches in height.

5E. Use when weeds are to be controlled by mowing.

E. Areas to be mowed shall be mowed when weed height exceeds 12 inches. Weeds shall be mowed to a height of 2 inches to 6 inches.

5F. Use when the disposal of mowed material and killed weeds is NOT required. Include funds in the Engineer's Estimate under Supplemental Work for removal of mowed material and killed weeds.

F. Disposal of mowed material and killed weeds after initial roadside clearing will not be required, unless otherwise directed by the Engineer. When directed by the Engineer, mowed material and killed weeds shall be disposed of and the disposal will be paid for as extra work as provided in Section 4-1.03D of the Standard Specifications.

6. Use when Clearing and Grubbing SSP is used, otherwise delete.

Roadside clearing work shall not include work required to be performed as clearing and grubbing as specified in Section 16, "Clearing and Grubbing," of the Standard Specifications.

USE WITH 2006 STANDARDS.
Add to SSP 20-350.
Other pesticides shall NOT be listed for use unless approved by Headquarters Maintenance.
1. Use when the use of pesticides is not allowed. Delete Paras 2 thru 13 when Para 1 is used.

PESTICIDES

Pesticides shall not be used on this project.

2. Use Para 2 and other applicable Paras when use of pesticides is permitted. Delete pesticides not approved by District Maintenance. Concurrence from Headquarters Maintenance may also be required. Delete Ammonium Sulfate and Magnesium Chloride from the list of pesticides if Para 11 is NOT used.

PESTICIDES

Pesticides used to control weeds shall conform to the provisions in Section 20-4.026, "Pesticides," of the Standard Specifications. Except as otherwise provided in these special provisions, pesticide use shall be limited to the following materials:

Cacodylic Acid
Diquat
Fluazifop-butyl
Glyphosate
Isoxaben (Preemergent)
Sethoxydim
Oxadiazon - 50 percent WP (Preemergent)
Oryzalin (Preemergent)
Pendimethalin (Preemergent)
Prodiamine (Preemergent)
Trifluralin (Preemergent)
Ammonium Sulfate
Magnesium Chloride
Melfluidide (Growth regulator)
Napropamide (Preemergent)

3 and 4. Use when a granular preemergent under mulch is permitted.
3. Delete pesticides not approved by District Maintenance.

Granular preemergents may be used when applied to areas that will be covered with mulch, excluding plant basins. Granular preemergents shall be limited to the following materials:

Dichlobenil (Preemergent)
Oxadiazon (Preemergent)

4

Granular preemergents shall be applied prior to the application of mulch. Mulch applications shall be completed in these areas on the same working day. Photosensitive dye will not be required.

5

Glyphosate shall be used to kill stolon type weeds.

6

Oxadiazon shall be of the emulsifiable concentration or wettable powder type, except when Oxadiazon is used under mulch in conformance with these special provisions.

7, 8 and 9. Use when applying preemergents.

7

Prior to the application of preemergents, ground cover plants shall have been planted a minimum of 3 days and shall have been thoroughly watered.

8

A minimum of 100 days shall elapse between applications of preemergents.

9

Except for ground cover plants, preemergents shall not be applied within 18 inches of plants or within wild flower seeding areas.

10

Growth regulators shall not be applied within 6 feet of trees, shrubs or vines.

11

Ammonium sulfate and magnesium chloride shall be used only in areas planted to Carpobrotus or Delosperma. Ammonium sulfate and magnesium chloride shall not be applied in a manner that allows the pesticides to come in contact with trees or shrubs.

12

If the Contractor elects to request the use of other pesticides on this project, the request shall be submitted, in writing, to the Engineer not less than 15 days prior to the intended use of the other pesticides. Except for the pesticides listed in these special provisions, no pesticides shall be used or applied without prior written approval of the Engineer.

13

Pesticides shall not be applied within the limits of the plant basins. Pesticides shall not be applied in a manner that allows the pesticides to come in contact with the foliage and woody parts of the plants.

USE WITH 2006 STANDARDS.
Add to SSP 20-350.
1*. Use when minimum distances are to be specified in the special provisions.

PREPARING PLANTING AREAS

Plants adjacent to drainage ditches shall be located so that, after construction of the basins, no portion of the basin walls shall be less than ___ feet from the flow line of graded ditches or less than ___ feet from the edge of paved ditches.

2. Use when minimum distances are shown on the Plant List of the plans.

PREPARING PLANTING AREAS

Plants adjacent to drainage ditches shall be located so that after construction of the basins, no portion of the basin walls shall be less than the minimum distance shown on the plans for each plant involved.

USE WITH 2006 STANDARDS.
Add to SSP 20-450.
Use when plant groups are to be irrigated AND weed germination is required.
DO NOT use for cultivation or wild flower seeding.
Weed germination areas shall be shown on the plans.
Delete Para 3 of SSP 20-454 when this SSP is used.

WEED GERMINATION

Weed germination shall be performed within the areas shown on the plans as "Weed Germination."

2*. Specify number of days for weed germination.

After the irrigation systems have been installed and the plant holes have been excavated and backfilled, no further planting work shall be done for a period of ___ days, except the soil shall be kept sufficiently moist to germinate weeds. Weeds that germinate shall be killed.

USE WITH 2006 STANDARDS.
Add to SSP 20-350.
1. Use when soil amendment is to be added to the plant holes, otherwise delete.

PLANTING

Backfill material for plant holes must be a mixture of soil and soil amendment. The quantity of soil amendment shall be as shown on the Plant List. Thoroughly mix backfill material and uniformly distribute throughout the entire depth of the plant hole without clods and lumps.

2. Delete reference to iron sulfate when not specified on the Plant List. Delete reference to granular or slow-releace fertilizer if not used. Include SSP 20-353 when this Para is used.

Apply or place commercial fertilizer (granular and slow release) and iron sulfate at the time of planting and at the rates shown on the Plant List.

3. Use when fertilizer packets have been specified on the Plant List, otherwise delete.

Place commercial fertilizer packets in the backfill of each plant at the time of planting and at the rate shown on the Plant List to within 6 inches to 8 inches of the soil surface and approximately one inch from the roots. When more than one fertilizer packet is required per plant, the packets must be distributed evenly around the root ball.

4. Use when root protectors are specified on the Plant List. Include SSP 20-506 when this Para is used.

Root protectors must conform to the provisions in "Root Protectors" of these special provisions.

5. Use when mulch is NOT required in plant basins. Edit as required.

Mulch is not required in the plant basins when mulch is not indicated on the Plant List for the plants involved.

6. Use with SSP 20-430, Paras 3 & 4, when a preemergent is to be applied under mulch areas, otherwise delete.

A granular preemergent must be applied to areas to be covered with mulch outside of plant basins.

7*. Use when there are mulched areas outside of plant basins, otherwise delete. Show mulched areas on the plans with quantities in cubic yards.

Mulch placed in areas outside of plant basins shall be spread to a uniform depth.

8. Use when mulch is to be applied to areas outside of proposed plant basins and when areas for mulch are to be restricted, otherwise delete.

Spread mulch from the outside of the proposed plant basin to the adjacent edges of shoulders, dikes, curbs, sidewalks, walls, fences, and existing plantings. If the proposed plant material is 12 feet or more from the adjacent edges of shoulders, dikes, curbs, sidewalks, walls, fences, and other existing plantings, the mulch must be spread 6 feet beyond the outside edge of the proposed plant basins.

9. Use when mulch is spread in areas. Ditches MUST be shown on the plans.

Do not place mulch within 4 feet of the centerline of earthen drainage ditches, within 4 feet of the edge of paved ditches, and within 4 feet of the centerline of drainage flow lines.

10. Use when SSP 20-630 or 20-640 is included.

Attention is directed to "Irrigation Systems Functional Test" of these special provisions regarding functional tests of the irrigation systems. Do not perform planting in an area until the functional test has been completed for the irrigation system serving that area.

Delete Paras 11 & 12 when Highway Planting Cost Break-Down is used in SSP 20-201 or 20-202. Include "Commercial Fertilizer (Packet)" in the Cost Break-Down.

11. Use Paras 11 & 12 when "Commercial Fertilizer (Packet)" is specified on the Plant List and is paid for as a separate contract item.

MEASUREMENT AND PAYMENT

Quantities of commercial fertilizer (packet) will be measured by the unit as determined from actual count in place.

12

The contract unit price paid for commercial fertilizer (packet) includes full compensation for furnishing and placing commercial fertilizer (packet), complete in place, as shown on the plans, as specified in the Standard Specifications and these special provisions, and as directed by the Engineer.

USE WITH 2006 STANDARDS.
Add to SSP 20-500.
Include Standard Plan H4.
Indicate plants that require foliage protectors by showing "Foliage Protector Required" in the "Remarks" column of the Plant List.
Use item code 205051, Foliage Protector.

FOLIAGE PROTECTOR

Foliage protectors shall be installed in conformance with the details shown on the plans, the provisions in Section 20-2.13A, "Foliage Protector," and Section 20-4, "Highway Planting," of the Standard Specifications and these special provisions.

2

Each foliage protector shall be held in place with two round stakes at least 2 inch nominal diameter or square stakes at least 2 inch x 2 inch in cross sectional dimensions. Stakes shall be made of wood and at least 5 feet in length. Support stakes shall be installed vertically, embedded in the soil, and fastened to the wire cylinder at 6 inch maximum centers. Wire cylinder shall be snug against stakes yet loose enough to be raised for application of pesticides or to perform weeding within the plant basin.

3

Steel stakes shall not be used.

4. Use when payment for foliage protectors is to be included in the cost of the plants involved.

Full compensation for foliage protectors shall be considered as included in the contract unit prices paid for the various plants involved and no additional compensation will be allowed therefor.

USE WITH 2006 STANDARDS.
Add to SSP 20-350.
Include Item 204099, "Plant Establishment Work."
1*. Use Para 1 for Highway Planting projects and delete Para 2. Include SSP S4-003.

PLANT ESTABLISHMENT WORK

The plant establishment period shall be Type 1 and shall be ___ working days.

2*. Use Para 2 for Highway Construction projects and delete Para 1. Include SSP S5-790. The plant establishment period shall not exceed 250 working days without written approval from the Chief of Office of State Landscape Architecture.

PLANT ESTABLISHMENT WORK

The plant establishment period shall be Type 2 and shall not be less than ___ working days.

3. Use when there are time restraints for sowing wild flower seed.

If wild flower seeding cannot be performed within the time limits specified under "Wild Flower Seeding" of these special provisions and the Engineer determines that the work except wild flower seeding and plant establishment work has been completed, the Engineer will notify the Contractor in writing of the start of the plant establishment period.

4. Use when SSP 20-530 is used.

Wild flower seeding not performed prior to the start of the plant establishment period shall be performed during the plant establishment period. The work involved in preparing areas to receive wild flower seeding and applying seed shall be in conformance with the provisions in "Wild Flower Seeding" of these special provisions.

5. Use when SSP 20-530 is used.

After sowing wild flower seed, plant establishment work for the wild flower seeding areas will not be required except for removing trash and debris and mowing. Mowing shall be performed after the wild flower seeds have set and the wild flowers have begun to die back.

6. Use for Highway Construction projects when SSP S5-790 is used.

Attention is directed to "Relief From Maintenance and Responsibility" in these special provisions regarding relief from maintenance and protection.

7*. Use with SSP 20-353 when a granular form of fertilizer is to be applied. Insert months of application to meet the region.

Commercial fertilizer (granular) shall be applied to trees, shrubs, vines and ground cover during the first week of _____ and _____ of each year. Commercial fertilizer shall be applied at the rates shown on the plans and shall be spread with a mechanical spreader wherever possible.

8*. Use with SSP 20-353 when a slow release fertilizer is to be applied. Insert months of application to meet the region.

Commercial fertilizer (slow release) shall be applied to trees, shrubs, vines and ground cover during the first week of _____ and _____ of each year. Commercial fertilizer shall be applied at the rates shown on the plans and shall be spread with a mechanical spreader wherever possible.

9. Use only if the plant establishment period is more than 125 working days. Edit or delete columns as applicable .

The center to center spacing of replacement plants for unsuitable ground cover plants shall be determined by the number of completed plant establishment working days at the time of replacement and the original spacing in conformance with the following:

ORIGINAL SPACING (Inches)	SPACING OF REPLACEMENT GROUND COVER PLANTS (Inches)		
	Number of Completed Plant Establishment Working Days		
	1-125	126-190	191-End of Plant Establishment
9	9	6	6
12	12	9	6
18	18	12	9
24	24	18	12
36	36	24	18

10. Use when a Remote Irrigation Control System (RICS) controls the irrigation system, otherwise delete.

During the plant establishment period, the plants shall be watered utilizing the Remote Irrigation Control System (RICS) software program. A watering schedule shall be submitted to the Engineer for use during the plant establishment period.

11. Edit as required.

Weeds within plant basins, including basin walls and ground cover, shall be controlled by hand pulling.

12. Edit as required.

Weeds within mulched and ground cover areas and outside of plant basins shall be controlled by killing.

13. If the ENTIRE project area outside of mulched areas, plant basins, ground cover, median areas, and paved areas is to be mowed, delete the second sentence. If the plan is to limit the mowing areas, retain both sentences. Add or delete items to fit conditions.

Weeds outside of mulched areas, plant basins, ground cover, the median, and paved areas shall be controlled by mowing. At locations where proposed planting areas are 12 feet or more from the edges of existing plantings to remain and from shoulders, dikes, curbs, sidewalks, fences, and walls, the mowing limit shall be 6 feet beyond the outer limits of the proposed planting area.

14. Edit as required.

Weeds within median areas, pavement, curbs, sidewalk, and other surfaced areas shall be controlled by killing.

15. Edit as required.

Vines shall be trained onto fences and walls or through cored holes in walls.

16

Except as specified in these special provisions, disposal of mowed material will not be required unless ordered by the Engineer. Disposal of mowed material, as directed by the

Engineer, will be paid for as extra work as provided in Section 4-1.03D,"Extra Work," of the Standard Specifications.

17. Use with SSP 20-430 when a growth regulator may be applied as provided in these special provisions.

At the option of the Contractor, a growth regulator may be applied to mowed areas, provided the growth regulator is approved in advance by the Engineer and the growth regulator is applied in conformance with these special provisions.

18

At the option of the Contractor, plants of a larger container size than those originally specified may be used for replacement plants during the first 125 working days of the plant establishment period.

19. Use when plant establishment period is 125 working days or more. Replacement plants for plants larger than 15-gallon size shall be the same size as originally planted.

After 125 working days of the plant establishment period have been completed, replacement of plants, except for ground cover plants, shall be one-gallon size for seedlings, pot and liner size plants; 5-gallon size for one-gallon size plants; 15-gallon size for 5-gallon size plants; and other plant replacement plants shall be the same size as originally specified.

20. Use with SSP 20-430 when a preemergent is required. Include funds in the Engineer's Estimate under Supplemental Work for applying a preemergent pesticide.

When ordered by the Engineer, one application of a preemergent pesticide conforming to the provisions in "Pesticides" of these special provisions, shall be applied between 40 working days and 50 working days prior to completion of the plant establishment period. This work will be paid for as extra work as provided in Section 4-1.03D,"Extra Work," of the Standard Specifications.

21. Use when foliage protectors are to be removed at the end of plant establishment (PE) period, otherwise delete.

During the plant establishment period, if plants become restricted by foliage protectors, the tops of foliage protectors shall be removed. Foliage protectors shall be completely removed, including the support stakes, within 15 working days prior to completion of the plant establishment period.

22

Wye strainers shall be cleaned at least 15 days prior to the completion of the plant establishment period.

23. Use with SSP 20-900, otherwise delete.

Previously installed filters shall be removed, cleaned and reinstalled at least 15 days prior to the completion of the plant establishment period.

24

The final inspection shall be performed in conformance with the provisions in Section 5-1.13, "Final Inspection," of the Standard Specifications and shall be completed a minimum of 20 working days before the estimated completion of the contract.

Use Paras 25 & 26 with SSP 20-504 when turf (sod) is to be planted.

25

Turf areas shall be mowed in conformance with the provisions in "Turf (Sod)" of these special provisions.

Full compensation for mowing and trimming turf (sod) and disposing of mowed and trimmed material during the plant establishment period shall be considered as included in the contract lump sum price paid for plant establishment work and no additional compensation will be allowed therefor.

USE WITH 2006 STANDARDS.
Add the applicable sections as required to cover irrigation work.
When conduit is to be installed, include Standard Plan A20A for Type A pavement marker.
1. Use when no irrigation work is to be performed and delete remainder of SSP.

10-2.05 (BLANK)

2. Use when irrigation work is to be performed.

10-2.05 IRRIGATION SYSTEMS

Irrigation systems shall be furnished and installed in conformance with the provisions in Section 20-5, "Irrigation Systems," of the Standard Specifications, except materials containing asbestos fibers shall not be used.

3. Do not delete this Para.

Method A pressure testing shall conform to the provisions in Section 20-5.03H(1), "Method A", of the Standard Specifications, except leaks that develop in the tested portion of the system shall be located and repaired after each test period when a drop of more than 5 pounds per square inch is indicated by the pressure gage. After the leaks have been repaired, the one hour pressure test shall be repeated and additional repairs made until the drop in pressure is 5 pounds per square inch or less.

4. Use in District 5 projects. May be used in other districts, otherwise delete.

Pipe supply lines shall be pressure tested in conformance with the provisions in Section 20-5.03H, "Pressure Testing," of the Standard Specifications, except the pipe (supply line) on the discharge side of the control valve shall be tested by Method B as specified in Section 20-5.03H(2), "Method B," of the Standard Specifications.

5. Use when water for irrigation is to be supplied from more than one service point.

Only pipeline trenches and excavation pits for supply lines being supplied from one water service point shall be open at one time. After pressure testing is complete, trenches and pits excavated for pipe supply lines, being supplied from one water service point, shall be backfilled prior to commencing excavations for pipe supply lines being supplied from another water service point.

USE WITH 2006 STANDARDS.
Add to SSP 20-600.
Consult your maintenance office for items covered in this SSP.

VALVE BOXES

Valve boxes shall conform to the provisions in Section 20-2.24, "Valve Boxes," of the Standard Specifications, except as otherwise provided herein.

2. Use when one kind of valve box material is required and edit accordingly. Delete Para 2 if there are no specific material requirements for valve boxes.

Valve boxes shall be precast portland cement concrete, fiberglass or reinforced plastic.

3. Use for concrete valve boxes and edit for type of cover.

Covers for concrete valve boxes shall be glass fiber reinforced plastic, plastic, concrete, cast iron or steel. Cast iron and steel covers shall be hinged with brass hinge pins for valve boxes containing valves smaller than 2 inches.

4. Use for plastic valve boxes and edit for type of cover.

Covers for plastic valve boxes shall be glass fiber reinforced plastic or plastic.

5. Use when valve box identification is to be stenciled on covers. Delete Paras 6, 7 & 8.

Valve boxes shall be identified on the top surface of the covers by stenciling with paint the appropriate abbreviations for the irrigation facilities contained in the valve boxes as shown on the plans. Valve boxes that contain remote control valves shall be identified by the appropriate letters and numbers (controller and station numbers). The letters and numbers shall be 2 inches in height. The stenciling paint shall be a commercial quality, epoxy resin base paint of a color which contrasts with the valve box covers.

6. Use when valve box identification is to be branded on glass fiber reinforced plastic or plastic valve box covers . Delete Paras 5, 7 & 8.

Valve boxes shall be identified on the top surface of the covers by branding the appropriate abbreviations for the irrigation facilities contained in the valve boxes as shown on the plans. Valve boxes that contain remote control valves shall be identified by the appropriate letters and numbers (controller and station numbers). The letters and numbers shall be 2 inches in height.

7. Use when valve box identification is to be by labels attached to covers. Delete Paras 5 & 6.

Valve boxes shall be identified on the top surface of the covers by labels containing the appropriate abbreviation for the irrigation facility contained in the valve box as shown on the plans. Valve boxes that contain remote control valves shall be identified by the appropriate letters and numbers (controller and station numbers). Labels for valve boxes shall conform to the provisions in Section 20-5.03F, "Valves and Valve Boxes," of the Standard Specifications.

8. Use when only one kind of label material is required and edit accordingly, otherwise delete. Use with Para 7.

Label material shall be plate plastic or polyurethane.

USE WITH 2006 STANDARDS.
Add to SSP 20-600.
Item Codes: Use any of the following applicable Item Codes:

ITEM CODE	DESCRIPTION
208569	1/2" Gate Valve
208570	3/4" Gate Valve,
208572	1" Gate Valve,
208573	1 1/4" Gate Valve,
208574	1 1/2" Gate Valve,
208575	2" Gate Valve,
208576	2 1/2" Gate Valve,
208588	3" Gate Valve,
208589	4" Gate Valve,
208590	6" Gate Valve,
208591	8" Gate Valve.

GATE VALVES

Gate valves shall be as shown on the plans and in conformance with the provisions in Section 20-2.28, "Gate Valves," of the Standard Specifications and these special provisions.

2

Gate valves, smaller than 3 inches in size, shall be furnished with a cross-handle.

3. Use when square nuts are desired.

Gate valves, 3 inches and larger in size, shall be furnished with a square nut and 3 long shank keys that will operate the valve.

4. Use when "flanged" gate valves are desired.

Gate valves, 3 inches and larger in size, shall be flanged type gate valves. Pipe flanges used to connect plastic or metal pipe to gate valves shall be plastic or metal.

5

Gate valves shall have a solid bronze or brass wedge.

USE WITH 2006 STANDARDS.
Add to SSP 20-600.
Call out irrigation controller as pedestal mounted or wall mounted on the plans and in the Engineer's Estimate.
Replace Para 2 with applicable provisions when irrigation controllers are solid-state with digital displays.

ELECTRIC AUTOMATIC IRRIGATION COMPONENTS

2

Irrigation Controllers

Irrigation controllers shall be single, solid-state independent controllers conforming to the following:

A. Irrigation controllers shall be fully automatic and shall operate a complete 14-day or longer irrigation program.
B. A switch or switches shall be provided on the face of the control panel that will turn the irrigation controller "on" or "off" and provide for automatic or manual operation. Manual operation shall allow cycle start at the desired station and shall allow activation of a single station.
C. The watering time of each station shall be displayed on the face of the control panel.
D. The irrigation controller and the low voltage output source shall be protected by fuses or circuit breakers.
E. The irrigation controller mechanism, panel and circuit board shall be connected to the low voltage control and neutral conductors by means of plug and receptacle connectors located in the irrigation controller enclosure.

2F*. Edit as required.

F. Each station shall have a variable or incremental timing adjustment with a range of ___ minutes to a minimum of one minute.
G. Irrigation controllers shall be capable of a minimum of 2 program schedules.
H. Irrigation controllers shall have an output that can energize a pump start circuit or a remote control valve (master).
I. When 2 or more irrigation controllers operate the same electric remote control valve (master), an isolation relay shall be provided and installed per the controller manufacturer's instructions.
J. Irrigation controllers shall be manufactured by the same company.
K. Where direct burial conductors are to be connected to the terminals strip, the conductors shall be connected with the proper size open-end crimp-on wire terminals. No exposed wire shall extend beyond the crimp of the terminal and the wires shall be parallel on the terminal strip.

3. Use when electric service for irrigation controllers and irrigation controller enclosure cabinets is included in Section 10-3, "Electric Service (Irrigation)."

Attention is directed to the provisions in "Electric Service (Irrigation)" of these special provisions regarding electrical power for irrigation controllers and irrigation controller enclosure cabinets.

4. Use when electrical power for irrigation controllers is included in the section for "Booster Pumps." Edit or delete Para 3 when Para 4 is used.

Attention is directed to the provisions in "Booster Pumps" of these special provisions, regarding electrical power for irrigation controllers.

5

Electric Remote Control Valves

Electric remote control valves shall conform to the provisions in Section 20-2.23, "Control Valves," of the Standard Specifications and the following:

Paras 5A thru 5E, realphabetize remaining Paras after editing.

5A. Edit for type of valves required.

A. Valves shall be glass filled nylon, brass, bronze, or cast iron construction.

5B. Edit if only one type of valve is to be installed. Delete Para 5C when Para 5B is used.

B. Valves shall be angle pattern (bottom inlet) or straight pattern (side inlet) as shown on the plans.

5C. Use when valves with combination angle patterns are required. Delete Para 5B when Para 5C is used.

C. Valves shall be combination angle pattern (bottom inlet and side inlet) installed as an angle pattern (bottom inlet), as shown on the plans.

5D. Use when a pressure regulator is required on a electric remote control valve. Insert a "P" in the center of the RCV standard symbol. Show new symbol in an Irrigation Legend on the plans.

D. Electric remote control valves shall be outfitted with adjustable pressure regulators as shown on the plans. Pressure regulators shall be compatible for use with the electric remote control valves and shall be of the same manufacturer as the electric remote control valves. Pressure regulators shall regulate and maintain the outlet pressure regardless of the incoming pressure. Pressure regulators shall withstand a cold water working pressure of 200 psi. The Contractor shall adjust the pressure regulators to provide proper operation of the irrigation system downstream of the electric remote control valves.

5E. Use when DC latching solenoids are required, otherwise delete.

E. Valve solenoids for (solar/battery) controller shall be DC latching and operate on 3.5 V.

6

Pull Boxes

Pull box installations shall conform to the provisions in Section 20-5.027I, "Conductors, Electrical Conduits and Pull Boxes," of the Standard Specifications.

7

Conductors

Low voltage, as used in this section "Conductors," shall mean 36 V or less.

8. Use when only adhesive cloth wrap-around markers are required, otherwise delete.

Low voltage control and neutral conductors in pull boxes and valve boxes, at irrigation controller terminals, and at splices shall be marked with adhesive cloth wrap-around markers.

9. Use when clear heat-shrinkable sleeves for markers at terminations and splices are required in addition to other markers, otherwise delete.

Low voltage control and neutral conductors in pull boxes and valve boxes, at irrigation controller terminals, and at splices shall be marked as follows:

A. Conductor terminations and splices shall be marked with adhesive backed paper markers or adhesive cloth wrap-around markers, with clear, heat-shrinkable sleeves sealed over the markers.
B. Non-spliced conductors in pull boxes and valve boxes shall be marked with clip-on, "C" shaped, white extruded polyvinyl chloride sleeves. Marker sleeves shall have black, indented legends of uniform depth with transparent overlays over the legends and "chevron" cuts for alignment of 2 or more sleeves.

10

Markers for the control conductors shall be identified with the appropriate number or letter designations of irrigation controllers and station numbers. Markers for neutral conductors shall be identified with the appropriate number or letter designations of the irrigation controllers.

11. Use when new conductors are to be installed in existing installations, otherwise delete.

New control and neutral conductors that are to replace existing control and neutral conductors shall be the same size and color as the existing control and neutral conductors being connected to.

12

The color of low voltage neutral and control conductor insulation, except for the striped portions, shall be homogeneous throughout the entire thickness of the insulation.

13

Insulation for conductors may be UL listed polyethylene conforming to UL44 test standards with a minimum insulation thickness of 41 mils for wire sizes 10AWG and smaller.

14. Use this Para with SSP S5-790 when the landscaping within the project limits has different locations and start times; otherwise, delete this Para.

Relief from maintenance and responsibility for electric automatic irrigation components will be granted in conformance with "Relief from Maintenance and Responsibility" of these special provisions. Before the Engineer grants relief from maintenance and responsibility, the functional test specified in Section 20-5.027J, "Testing," of the Standard Specifications shall be satisfactorily completed, and the manufacturer's written instructions shall be provided to the Engineer on the use and adjustment of the installed irrigation controllers.

USE WITH 2006 STANDARDS.
Add to SSP 20-600.

ARMOR-CLAD CONDUCTORS

Armor-clad conductors shall be used in direct burial applications from pull boxes adjacent to irrigation controller to remote control valves and other irrigation facilities in conformance with the details shown on the plans and these special provisions.

2

Armor-clad conductors shall conform to the following:

A. Conductors shall be the proper size for the application, and shall be solid, uncoated copper with a conductor size not less than 90 percent of the AWG diameter required.
B. At the Contractor's option, conductor insulation coverings shall be either of the following:

1. Polyvinyl chloride (PVC) conforming to UL style, Type UF 60°C, 600 V. Average thickness of insulation shall be not less than 60 mils, with a minimum thickness of 54 mils, or
2. UL listed polyethylene conforming to UL44 test standards with a minimum insulation thickness of 41 mils for wire sizes 10AWG and smaller.

C. Armor shall be a minimum 0.005-inch thick by 0.50-inch wide Type 304 stainless steel tape that is helically wrapped over each conductor with a 33 percent minimum overlap.
D. Outer jacket for conductors shall be sunlight resistant PVC and shall conform to the Insulated Power Cable Engineer's Association (ICEA) S-61-402, NEMA Standard WC5, and UL Listing 1263. Nominal thickness of the outer jacket shall be 30 mils with a minimum thickness of 24 mils.

3. Use when Contractor has the option of using nonarmor-clad conductors in electrical conduits.

At the option of the Contractor, conductors conforming to the provisions in Section 20-2.31D, "Conductors," of the Standard Specifications may be used when the conductors are installed in an electrical conduit.

4. Use when irrigation system work will be paid for as individual items, otherwise delete.

Armor-clad conductors will be measured and paid for as control and neutral conductors.

USE WITH 2006 STANDARDS.
Add to SSP 20-600.
Add or delete features to fit the model required.

REMOTE CONTROL VALVE ACTUATOR SYSTEM

A remote control valve actuator system shall consist of a portable (hand held) receiver, a transmitter, a field carrying case, an AC power charging unit, and a receiver connector. The remote control valve actuator equipment shall be manufactured by the same manufacturer as the irrigation controller and shall be fully compatible with the irrigation controller. The receiver and transmitter shall comply with Federal Communications Commission (FCC) Rules and Regulations, Part 15, as of the date of manufacture.

2

The receiver connector shall be attached directly to the terminal strip of each irrigation controller and continue out to the socket head mounted to the outside of the irrigation controller enclosure cabinet as shown on the plans. The connector shall have an 18-inch jacketed multi-conductor cable with a spade lug terminal and shall have a "D" subminiature connector with gold plated contacts which allows the receiver unit to be plugged directly into the connector. The connector housing shall be weather resistant thermoplastic with a hinged socket head cap with a screw to be used as a locking mechanism. The socket head cap screw shall be operated by means of a key which shall be provided by the manufacturer.

3

The receiver shall be plugged into the receiver connector and shall operate the stations of the irrigation controller on radio signals from the transmitter. The receiver shall receive radio signals at a minimum distance of one mile. Receiver circuitry shall be protected from overload by a field replaceable fuse. The receiver shall operate on 24 V(ac).

4

The transmitter shall provide a 2-way FM, radio signal for a minimum range of one mile to the receiver located at the irrigation controller enclosure cabinet. The transmitter shall have a digital key pad and instant actuation of the stations, master valves or pumps in random, numerical or reverse numerical sequences by pressing a single key for each function. The transmitter shall allow for remote data retrieval, manual control and programming. The transmitter shall operate a master valve or pump independently of the controller stations. The transmitter shall transmit a radio frequency of 27.250 MHz.

5

The power source for the portable units shall consist of an internal charged battery pack which shall be recharged by the charging unit. The charging unit shall have an input of 110 V(ac) and an output of 24 V(ac) at 1.5 A.

6

The field carrying case shall allow complete and convenient operation of the unit while in the case.

7*. Edit for number of sets.

Before the irrigation system functional test begins, __ complete remote control valve actuator systems, except for receiver connectors, shall be delivered to the Engineer.

8. Use when the cost of the remote control valve actuator system is to be included in the irrigation controller costs; otherwise delete.

Full compensation for the remote control valve actuator system shall be considered as included in the contract price paid for the various irrigation controllers involved and no additional compensation will be allowed therefor.

Use Paras 9 and 10 when the remote control valve actuator system is paid for as a separate contract item.

9

The quantities of remote control valve actuator systems will be measured by the unit as determined from actual count in place.

10

The contract unit price paid for remote control valve actuator system shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals, and for doing all the work involved in installing a remote control valve actuator system, complete in place, as shown on the plans, as specified in the Standard Specifications and these special provisions, and as directed by the Engineer.

USE WITH 2006 STANDARDS.
Add to SSP 20-600.
Include SSP 86-199 in Section 10-3.
Include Standard Plans H10 and ES-3H.
Include SSP S8-M10.
Do not include SSP S8-W04.
At each controller enclosure cabinet shown on the electrical plans, indicate whether single or double irrigation controllers are to be installed.
Use item code 208301, Irrigation Controller Enclosure Cabinet.

IRRIGATION CONTROLLER ENCLOSURE CABINET

Irrigation controller enclosure cabinets shall be constructed and equipment installed in the cabinets in conformance with the details shown on the plans, the provisions of Section 86-3.04A, "Cabinet Construction," of the Standard Specifications, and these special provisions.

2

Electric service shall be installed in accordance with "Electric Service (Irrigation)" of these special provisions.

3

Irrigation controller enclosure cabinets shall be provided with cross ventilation, roof ventilation or a combination of both. The ventilation shall not compromise the weather resistance properties of the irrigation controller enclosure cabinets and shall be fabricated by the manufacturer.

4

The anchorage arrangement shall be inside the cabinet as shown on the plans. Dimensions of the cabinet shall be suitable for the equipment to be installed as shown on the plans and specified in these special provisions.

Paras 5 and 6 require the height, width and depth of the irrigation controller enclosure cabinet to be inserted.
Maintenance shall have input on the dimensions of the cabinet.
5*. Fill in the blanks or delete Para if not required.

Irrigation controller enclosure cabinet dimensions for a single irrigation controller shall be ___ inches (Height) x ___ inches (Width) x ___ inches (Depth).

6*. Fill in the blanks or delete Para if not required.

Irrigation controller enclosure cabinet dimensions for double irrigation controller shall be ___ inches (Height) x ___ inches (Width) x ___ inches (Depth).

7

Irrigation controller enclosure cabinets shall be fabricated in conformance with the provisions in Section 86-3.04A, "Cabinet Construction," of the Standard Specifications.

8. Edit for type of cabinet materials. Delete if all 3 options are acceptable.

Irrigation controller enclosure cabinets shall be fabricated of cold rolled steel, stainless steel or aluminum.

9. Change color and color number as required to conform to District standard.

Irrigation controller enclosure cabinets fabricated of cold rolled steel or aluminum shall be cleaned and painted by the manufacturer in conformance with the provisions in Section 86-3.04A, "Cabinet Construction," of the Standard Specifications. The finish color of the irrigation controller enclosure cabinets shall be a tan to light brown closely matching Federal Standard 595B, Color No. 20450.

10. Use when State standard lock core door lock system is required and delete Para 11.

Door locks for the irrigation controller enclosure cabinets shall be a removable-core mortise cam cylinder door lock that receives the State's lock core. The State's lock core is a "Best" construction core. Keys shall be removable from the locks in the locked position only. Door locks shall be installed in conformance with the manufacturer's written instructions and recommendations. Two keys for each door lock shall be delivered to the Engineer.

11. Use when padlock door lock system is required and delete Para 10. Select Para 2F in SSP S8-M10 or Para 6 in SSP S8-M15.

Irrigation controller enclosure cabinet doors shall not be furnished with integral door locks. Irrigation controller enclosure cabinet door handles shall have provisions for padlocking in the latched position. Padlocks will be State-furnished as provided under "State-Furnished Materials" of these special provisions.

12. Use when plywood mounting panel is required and delete Para 13 & 14.

Mounting panels shall be fabricated of 3/4 inch exterior AC grade veneer plywood. The panels shall be painted with one application of an exterior, latex based, wood primer and two applications of an exterior, vinyl acrylic enamel, white in color. The panels shall be painted on all sides and edges before installation of the panels in the cabinets and the equipment on the panels.

13. Use when metal mounting panel is required and delete Para 12 & 14.

Mounting panels shall be fabricated of metal sheets with a minimum thickness of 10-gage for cold rolled steel or 3/16 inch for aluminum.

14. Use when stainless steel mounting panel is required and delete Para 12 & 13

Mounting panels shall be fabricated of stainless steel metal sheets with a minimum thickness of 4 mm.

15

Inside of the doors shall have provisions for storage of the irrigation plans.

16. Use when rain sensors are required.

Solid-state automatic shut-off rain sensor units shall be installed for the irrigation controller enclosure cabinets. Rain sensor units shall automatically interrupt the master remote control valves when approximately 1/8 inch of rain has fallen. The irrigation system shall automatically be enabled again when the accumulated rainfall evaporates from the rain sensor unit collection cup. Rain sensor units shall be rated 24 V (ac) to 30 V (ac). Static charge protection shall be included to protect against lightning damage.

17. Use for installing standard irrigation controller in irrigation controller enclosure cabinets. Delete Para 18.

Equipment, except for field wiring, shall be installed in the cabinet in a shop prior to field installation.

18. Use for installing RICS components in irrigation controller enclosure cabinets. Delete Para 17.

Equipment, except for field wiring, shall be installed in the cabinet in a shop by the equipment manufacturer's representative or distributor prior to field installation.

Delete Paras 19 and 20 when Irrigation System Cost Break-Down is used in SSP 20-201 or 20-202. Include "Irrigation Controller Enclosure Cabinet" in the Cost Break-Down.

Use Paras 19 and 20 when irrigation controller enclosure cabinets are paid for as a separate contract item.

19

Irrigation controller enclosure cabinets will be measured by the unit as determined from actual count in place.

20. Edit as required. Delete reference to rain sensor when Para 16 is not used.

The contract unit price paid for irrigation controller enclosure cabinet shall include full compensation for furnishing all labor, materials, tools, equipment (including rain sensor units), and incidentals, and for doing all the work involved in fabricating and installing irrigation controller enclosure cabinets, complete in place, including constructing foundations, pads and conduits to pull boxes adjacent to cabinets, and installing equipment within the cabinets, except controllers, as shown on the plans, as specified in the Standard Specifications and these special provisions, and as directed by the Engineer.

USE WITH 2006 STANDARDS.
Use when there is an automatic irrigation system and plant establishment period. Add to SSP 20-600.
Include Para 10 of SSP 20-500 when this SSP is used.

IRRIGATION SYSTEMS FUNCTIONAL TEST

Functional tests for the irrigation controllers and associated automatic irrigation systems shall conform to the provisions in Section 20-5.027J, "Testing," of the Standard Specifications and these special provisions.

2

Tests shall demonstrate to the Engineer, through one complete cycle of the irrigation controllers in the automatic mode, that the associated automatic components of the irrigation systems operate properly. If automatic components of the irrigation systems fail a functional test, these components shall be repaired at the Contractor's expense and the testing repeated until satisfactory operation is obtained.

3. Edit as required for equipment included in the project.

Associated automatic components shall include, but not be limited to, booster pump systems, remote control valve actuator systems, remote control valves, and rain sensors.

4

Upon completion of work on an irrigation system, including correction of deficiencies and satisfactory functional tests for the systems involved, the plants to be planted in the area watered by the irrigation system may be planted provided the planting areas have been prepared as specified in these special provisions.

USE WITH 2006 STANDARDS.
Add to SSP 20-600.
For roadway construction projects with highway planting show pressure rating (PR) for plastic pipe in a note on the plans, except for "PR 200" which is already shown on the Standard Plans. For highway planting projects the pressure rating is shown on the Irrigation Quantity sheets. PR 315 ring type pipe is not available. Maximum pressure rating for ring type pipe is 200.

PIPE

1*. Use when galvanized steel pipe is required between water meters and backflow preventer assemblies. Delete "installed between water meters and backflow preventer assemblies" when galvanized steel pipe supply lines are required but there are no water meters or backflow preventer assemblies.

Steel Pipe

Galvanized steel pipe supply lines installed between water meters and backflow preventer assemblies must be installed not less than __ inches below finished grade, measured to the top of the pipe.

2

Plastic Pipe

Plastic pipe supply lines must be polyvinyl chloride (PVC) 1120 or 1220 pressure rated pipe with the minimum pressure rating (PR) shown on the plans.

3. Use when plastic pipe supply lines with ring type joints are specified for pipe with a diameter of 3 inches or larger.

Plastic pipe supply lines and fittings that are 3 inches or larger in diameter on the supply side of control valves must be the rubber ring gasket type, except when pressure rating (PR) 315 plastic pipe supply line is required.

4. Use when plastic pipe supply lines require solvent cemented type joints.

Plastic pipe supply lines less than 3 inches in diameter must have solvent cemented type joints. Primers must be used on the solvent cemented type joints.

5. Use ONLY when district maintenance has determined that additional coverage over plastic pipe supply lines main with solvent cemented type joints is necessary. Be sure to increase plastic pipe supply line estimate prices to account for deeper trenches and riser length. The Standard Specifications requires one foot coverage over pipe with solvent cemented type joints.

Plastic pipe supply lines (main) must have a minimum cover of 1.5 feet.

6. Use when the plastic pipe supply lines for Type C sprinklers must have a minimum cover of 6 inches. Delete if the standard depth of one foot for plastic pipe supply line (lateral) is desired.

Plastic pipe supply lines downstream from the remote control valves for Type C sprinklers must have a minimum cover of 6 inches.

7*. Use for "plastic pipe (irrigation lines)" ONLY and NOT "plastic pipe supply lines." Edit as required. Ensure that depth specified agrees with plan details

Plastic pipe (irrigation lines) must be installed not less than ___ inches below the finished grade, measured to the top of the pipe.

8. Use when the use of pipe thread sealant tape is NOT permitted.

A nonhardening joint compound must be used in place of the pipe thread sealant tape conforming to the provisions in Section 20-5.03E, "Pipe," of the Standard Specifications. Joint compounds must be applied in conformance with the manufacturer's recommendations.

9

Fittings for plastic pipe supply lines with a pressure rating (PR) of 315 must be Schedule 80.

Paras 10 and 11 are for District 11 projects ONLY. Use only when copper pipe is required by local water districts between water meters and backflow preventer assemblies, otherwise delete. Identify copper pipe on the Irrigation Plans. When Paras 10 and 11 are used, delete Para 1.

10

Copper Pipe

Copper pipe must be Type "K" rigid conforming to ASTM Designation: B88. Use wrought copper or cast bronze fittings, soldered or threaded. Use 95% tin and 5% antimony solder.

11

Copper pipe supply lines installed between water meters and backflow preventer assemblies must be installed not less than 18 inches below finished grade, measured to the top of the pipe.

USE WITH 2006 STANDARDS.
Add to SSP 20-700.

ULTRAVIOLET RESISTANT PLASTIC PIPE

Ultraviolet resistant plastic pipe supply line shall be Schedule 40, Type I, Grade I, ultraviolet resistant polyvinyl chloride (UVR-PVC) pipe and shall conform to the requirements in ASTM Designation: D 1785.

2

Fittings shall be Schedule 40, ultraviolet resistant polyvinyl chloride (UVR-PVC), Type I, Grade I, conforming to the requirements in ASTM Designation: D 2466.

3

The pipe shall be a homogeneous and uniform color and shall be manufactured of at least 80 percent vinyl chloride resin with ultraviolet stabilizers, non-polyvinyl chloride (PVC) resin modifiers and coloring ingredients which will resist the damaging effects of ultraviolet wave lengths of solar radiation.

4

Solvent cement for ultraviolet resistant plastic pipe and fittings shall conform to the requirements of the local Air Quality Management District and shall be as recommended by the pipe manufacturer.

5. Use when ultraviolet resistant (UVR) plastic pipe is to be placed on the surface, otherwise delete.

Ultraviolet resistant plastic pipe shall be secured on grade as shown on the plans.

6

Quantities of ultraviolet resistant plastic pipe (supply line) will be measured by the linear foot as determined from the slope length designated by the Engineer. Pipe placed in excess of the lengths designated will not be paid for.

7

The contract price paid per linear foot for ultraviolet resistant plastic pipe (supply line) of the sizes shown in the Engineer's Estimate shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals, and for doing all the work involved in installing ultraviolet resistant plastic pipe (supply line), complete in place, including securing to grade, as shown on the plans, as specified in the Standard Specifications and these special provisions, and as directed by the Engineer.

USE WITH 2006 STANDARDS.
Add to SSP 20-600. DO NOT pay for water meters by the Lump Sum.

WATER METER

Water meters for the irrigation systems will be furnished and installed by the serving utility at the locations shown on the plans.

2. Use with Para 3 when the Contractor is to arrange for water meter installations.

The Contractor shall make the arrangements and pay the costs and fees required by the serving utility.

3*. Include CONTRACT ITEM CODE: 208304 WATER METER in the Engineer's Estimate to compensate the Contractor for the fee for the water meter installations. Insert Water Company or Water District name and add fee.

The _____ Water _____ has established a fee of $_____ for furnishing and installing a water meter. If, at the time of installation, this fee has been changed, the State will take a credit for the reduction in the fee, or the State will pay the difference for the increase in the fee. The credit or payment will be taken or paid on the first monthly progress payment made after the meter is installed. The Contractor shall furnish the Engineer with a copy of the invoice for the installation fee.

4. Use when the State is to arrange for water meter installations. Include CONTRACT ITEM CODE: 066205 INSTALL WATER METER under State-Furnished Materials in the Engineer's Estimate.

Upon receipt of a written request from the Contractor, the Engineer will make arrangements with the serving utility to install the water meters. The State will pay the costs and fees charged by the serving utility for the installations.

5

Attention is directed to Section 20-4.06, "Watering," of the Standard Specifications. The Contractor shall make the arrangements for furnishing and applying water until the water meters have been installed by the serving utility.

Use Paras 6 and 7 when the Contractor is to arrange for water meter installations and there is a contract item in the Engineer's Estimate. Do not use when water meters are State-furnished.

6

The quantity of water meters will be measured by the unit as determined from actual count in place.

7

The contract unit price paid for water meter shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals, and for doing all the work involved in furnishing and installing water meters, complete in place, as shown on the plans, as specified in the Standard Specifications and these special provisions, and as directed by the Engineer.

USE WITH 2006 STANDARDS.
Add to SSP 20-600.
Backflow preventer assemblies shall be installed in backflow preventer assembly enclosures.
Include SSP 20-710, Thrust Block, when using this SSP.
Include SSP 20-751, Backflow Preventer Assembly Enclosure, when using this SSP.
Include Standard Plan H8.
Item Codes: Use any of the following applicable Item Codes:

ITEM CODE	DESCRIPTION
208422	3/4" Backflow Preventer Assembly
208423	1" Backflow Preventer Assembly,
208424	1 1/4" Backflow Preventer Assembly,
208425	1 1/2" Backflow Preventer Assembly,
208426	2" Backflow Preventer Assembly,
208427	2 1/2" Backflow Preventer Assembly,
208428	3" Backflow Preventer Assembly,
208430	4" Backflow Preventer Assembly.

BACKFLOW PREVENTER ASSEMBLIES

Backflow preventers shall conform to the provisions in Section 20-2.25, "Backflow Preventers," of the Standard Specifications and these special provisions.

2

Backflow preventers shall have current approval from the University of Southern California Foundation for Cross-Connection Control and Hydraulic Research (USC Foundation).

3

Before backflow preventer assembly installation, the Contractor shall provide the Engineer with the portion of the USC Foundation "List of Approved Backflow Prevention Assemblies" showing type of assembly, manufacturer's name, model number, edition of the manual under which the assembly was approved, approval date and the last renewal date.

4

The "List of Approved Backflow Prevention Assemblies" is available to Foundation Members. Membership information to join the USC Foundation is available at:

http://www.usc.edu/dept/fccchr/membership.html

5

Questions concerning the USC Foundation "List of Approved Backflow Prevention Assemblies" can be answered by calling the Foundation at toll free (866) 545-6340.

6*. Edit as required.

Pressure loss through the backflow preventers shall not exceed the following:

BACKFLOW PREVENTER SIZE (Inches)	FLOW RATE (Gallons Per Minute)	PRESSURE LOSS (PSI)

USE WITH 2006 STANDARDS.
Add to SSP 20-750.
Do not include SSP S8-W04.
Include SSP S8-M10.
Include Standard Plan H8.
Use item code 208421, Backflow Preventer Assembly Enclosure.

BACKFLOW PREVENTER ASSEMBLY ENCLOSURE

Enclosures shall be fabricated of structural steel angles and flattened expanded metal and shall be installed over backflow preventer assemblies on a portland cement concrete pad as shown on the plans and in conformance with these special provisions.

2

Expanded metal for sides, ends and top panels shall be fabricated from 9-gage minimum thickness, sheet steel. The flattened expanded metal openings shall be approximately 3/4-inch x 1-3/4-inch in size.

3

Expanded metal panels shall be attached to the 3/16-inch thick steel angle frames by a series of welds, not less than 1/4-inch in length and spaced not more than 4-inches on center, along the edges of the enclosure.

4

Lock-guard shall be made of a minimum thickness of 3/16-inch cold rolled steel.

5

Padlocks will be State-furnished in accordance with "State-furnished Materials" of these special provisions.

6

Enclosures shall be galvanized, after fabrication, in conformance with the provisions in Section 75-1.05, "Galvanizing," of the Standard Specifications.

7

Hold down bolt assemblies shall be galvanized and shall be installed when the portland cement concrete pad is still plastic. Nuts shall be hexagonal and washers shall be the lock type.

8. Editing of color is allowed.

Enclosures shall be painted by the manufacturer with one application of a commercial quality pre-treatment, vinyl wash primer and a minimum of one application of a commercial quality, exterior enamel for metal. The finish color shall be a tan to light brown closely matching Federal Standard No. 595B, Color No. 20450.

9. Editing of color is allowed. Delete the last sentence "Stainless steel enclosures shall be powder coated a tan to light brown color closely matching Federal Standard 595B, Color No. 20450, by the manufacturer" if a powder coat finish is not required.

All parts of the backflow preventer assembly enclosure, including hold down assemblies, may be constructed of stainless steel instead of standard steel materials specified above. Stainless steel enclosures shall conform to the provisions herein except galvanizing, priming and

painting shall not be required. Stainless steel enclosures shall be powder coated a tan to light brown color closely matching Federal Standard 595B, Color No. 20450, by the manufacturer.

10

Lock-guard for stainless steel enclosures shall be 12-gage stainless steel, Type 304.

Delete Paras 11 and 12 when Irrigation System Cost Break-Down is used in SSP 20-201 or 20-202. Include "Backflow Preventer Assembly Enclosure" in the Cost Break-Down. Use Paras 11 and 12 when backflow preventer assembly enclosures are paid for as a separate contract item.

11

The quantity of backflow preventer assembly enclosures will be measured by the unit as determined from actual count in place.

12

The contract unit price paid for the backflow preventer assembly enclosure shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals, and for doing all the work involved in furnishing and installing a backflow preventer assembly enclosure, complete in place, including constructing the portland cement concrete pad, as shown on the plans, as specified in the Standard Specifications and these special provisions, and as directed by the Engineer.

USE WITH 2006 STANDARDS.
Add to SSP 20-750.
Use for testing of NEW backflow preventers only.
Use SSP 20-304 for testing existing backflow preventers.

TESTING NEW BACKFLOW PREVENTERS

New backflow preventers shall be tested for proper operation in conformance with the provisions in Section 20-5.03J, "Check and Test Backflow Preventers," of the Standard Specifications and these special provisions.

2

Tests for new backflow preventers shall be satisfactorily completed after installation and before operation of the irrigation systems.

3. The last sentence of this Para may be deleted ONLY IF requested by Maintenance when a contract is 90 working days or less.

New backflow preventers shall be retested one year after the satisfactory completion of the previous test, and each year thereafter until the plant establishment period is completed. An additional test shall be provided not more than 10 days prior to acceptance of the contract.

USE WITH 2006 STANDARDS.
Add to SSP 20-600.
Add other sprinkler requirements not shown on the plans that are applicable.

SPRINKLERS

Sprinklers shall conform to the type, pattern, material, and operating characteristics listed in the "Sprinkler Schedule" shown on the plans.

2. Use when Type III risers are required.

Flexible risers shall be ultraviolet (UV) resistant, brown in color and shall conform to the details shown on the plans.

3. Use when a flow shutoff device is required. Place an X in the Sprinkler Schedule column for flow shutoff device. If a specific flow shutoff device is desired, add additional information as required.

Flow shutoff device on risers shall automatically and instantly stop the flow of water from a riser when the riser is broken on the downstream side of the device. The flow shutoff device shall be installed as recommended by the manufacturer of the device.

USE WITH 2006 STANDARDS.
Add to SSP 20-800.
Include a detail on the plans.

SPRINKLER (TYPE D)

Type D sprinklers shall be plastic, nonadjustable, pressure compensating emitters with automatic flushing action. Emitter shall be regulated by dual silicone diaphragms. Emitters shall have the flow rate and operating pressure range shown on the plans.

2

Emitters shall be installed as shown on the plans and in conformance with the manufacturer's written instructions. Two copies of the written instructions shall be furnished to the Engineer prior to installation.

3

Emitters shall be equipped with a single barb which shall be inserted into a shrub nut. Shrub nuts shall be installed on a threaded polyvinyl chloride (PVC) riser as shown on the plans.

4

Flexible tubing for the emitters shall be virgin polyethylene plastic containing 2 percent to 3 percent carbon black. The size of the tubing shall be as recommended by the manufacturer of the emitter.

5

Discharge ends of tubing shall be held in place, within the basin and approximately 2 inches above grade, by plastic or metal stakes. Stakes shall be as recommended by the manufacturer of the emitter.

USE WITH 2006 STANDARDS.
Add to SSP 20-800.
Use when C-2 bubblers are installed below grade to meet project specific requirements, or to prevent vandalism and other damage.
Include a detail on the plans. Details available at http://pd.dot.ca.gov/design/landscape/nssp/index.htm
Add sprinkler requirements to the Sprinkler Schedule. The use of pressure compensating bubblers is recommended.

SPRINKLER (TYPE C-2 MOD)

Sprinkler (Type C-2 MOD) shall be furnished and installed as shown on the plans, in conformance with these special provisions and as directed by the Engineer.

2

Drainpipe shall be commercially available, rigid, perforated, polyvinyl chloride (PVC) pipe with holes spaced not more than 6 inches on center on one side of the pipe.

3*. Edit color as required, typically available in green, black, gray and sand.

Drain grate shall be a commercially available, one-piece, injection molded drain grate manufactured from structural foam polyolefins, with ultraviolet light inhibitors. Color of drain grate shall be _____.

Use either Para 4 or 5.
4. Use Para 4 when drainpipe will be filled with gravel. Delete Para 5 when 4 is used. Verify that gravel at the size specified is locally available.

Gravel for filling the drainpipe shall have 100 percent passing the 3/4 inch sieve and 100 percent retained on the 1/2 inch sieve. Gravel shall be clean, washed, dry and free from clay or organic material.

5. Use Para 5 when drainpipe will be filled with pea gravel. Delete Para 4 when 5 is used. Verify that pea gravel at the size specified is locally available.

Pea gravel for filling the drainpipe shall have a maximum diameter of 1/2 inch. Pea gravel shall be naturally rounded aggregate, clean, washed, dry and free from clay or organic material.

Use Paras 6 & 7 when Sprinkler (Type C-2 MOD) is designated in the Engineers Estimate. Use Item Code 208480 Sprinkler (Type C-2 MOD).
Delete Paras 6 & 7 when Highway Planting/Irrigation System Cost Break-Down is used in SSP 20-201 or 20-202. Include Sprinkler (Type C-2 MOD) in the Cost Break-Down.

6

Sprinkler (Type C-2 MOD) will be measured and paid for by the unit as determined from the actual count in place.

7

The contract unit price paid for Sprinkler (Type C-2 MOD) shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals, and for doing all the work

involved in installing Sprinkler (Type C-2 MOD), complete in place, as shown on the plans, as specified in these special provisions, and as directed by the Engineer.

USE WITH 2006 STANDARDS.
Add to SSP 20-600.
1*. Edit as required.

FLUSH VALVES

Flush valves shall consist of a garden valve, riser and a plastic pipe (locator). Flush valves shall be installed at the ends of supply lines for Type ___ sprinklers as shown on the plans.

2

A total of 3 loose keys for the garden valves, as specified herein, shall be furnished to the Engineer prior to completion of the project.

3

Pipe supply line (locator) shall conform to the provisions in Section 20-2.20, "Plastic Pipe (Locator)," of the Standard Specifications.

USE WITH 2006 STANDARDS.
Add to SSP 20-600.
Include a detail on the plans.
1. Edit for components as required.

FILTER ASSEMBLY UNIT

A filter assembly unit shall consist of a filter housing, a reusable filter cartridge, a ball valve, fittings, pipe, and valve box as shown on the plans.

2

Filter assembly units shall withstand a cold water working pressure of 150 psi.

3

Pressure loss through the filter assembly units shall not exceed the following:

FILTER ELEMENT SIZE (inches)	MAX FLOW RATE (GPM)	PRESSURE LOSS AT MAX FLOW (psi)

4

Filter housings shall be manufactured of reinforced polypropylene plastic.

5*. Use and edit as required when stainless steel filter cartridges are required.

Filter cartridges shall be reusable stainless steel and shall be capable of __ size mesh filtration.

6. Use when stainless steel filter cartridges are NOT required.

Filter cartridges shall be threaded plastic rings attached to one another to produce a reusable cylindrical form filter. Filters shall be capable of 140-mesh size mesh filtration.

7

Ball valves in filter assembly units shall be polyvinyl chloride (PVC). The ball seats shall be high molecular weight-high density polyethylene.

USE WITH 2006 STANDARDS.
Add to SSP 20-600 for reduced pressure on main supply lines.
Include a detail on the plans.

PRESSURE REDUCING VALVE

Pressure reducing valves shall consist of pressure reducing valves, pressure gages, valve boxes with wire mesh and gravel or crushed rock, fittings, and pipe as shown on the plans.

2

Pressure reducing valves shall be the spring diaphragm type, manufactured of bronze or cast iron construction, hydraulically operated and pilot controlled, and shall have flanged or threaded pipe connections. Pressure reducing valves with threaded connections shall be installed with unions on the inlet side of the valves. Pressure reducing valves shall not have internal filter screens.

3

Pressure gages for pressure reducing valves shall be hermetically sealed with neoprene and shall have watertight polycarbonate cases and covers with molded clear polycarbonate windows. Gages shall be 2 inches in diameter, calibrated from 0 psi to 160 psi, and have black aluminum pointers that contrast with gage faces and have brass stems. Internal gage parts shall be brass and phosphor bronze.

4*. Edit as required.

Pressure reducing valves shall have an adjustable discharge pressure range of ___ psi to ___ psi.

USE WITH 2006 STANDARDS.
Add to SSP 20-600.
Edit as required when there are no existing irrigation facilities.
1. Edit for limits when existing irrigation facilities are NOT to have a final check.

FINAL IRRIGATION SYSTEM CHECK

A final check of existing and new irrigation facilities shall be performed not more than 40 working days and not less than 30 working days prior to acceptance of the contract.

2

The length of watering cycles using potable water measured by water meters for the final check of irrigation facilities will be determined by the Engineer.

3

Remote control valves connected to existing and new irrigation controllers shall be checked for automatic performance when the controllers are in automatic mode.

4

Unsatisfactory performance of irrigation facilities installed or modified by the Contractor shall be repaired and rechecked at the Contractor's expense until satisfactory performance is obtained, as determined by the Engineer.

5

Repair or replacement of existing irrigation facilities due to unsatisfactory performance shall conform to the provisions in "Existing Highway Irrigation Facilities" of these special provisions.

6

Nothing in this section "Final Irrigation System Check" shall relieve the Contractor of full responsibility for making good or repairing defective work or materials found before the formal written acceptance of the entire contract by the Director.

7. Use when there is a contract item for plant establishment work, otherwise use "prices paid for the various contract items of irrigation systems involved."

Full compensation for checking the irrigation systems prior to the acceptance of the contract shall be considered as included in the contract lump sum price paid for plant establishment work and no additional compensation will be allowed therefor.

USE WITH 2006 STANDARDS.
Use in ALL projects that include electrical work.

SECTION 10-2. (BLANK)

SECTION 10-3. ELECTRICAL SYSTEMS

1*. Edit as required.

10-3.01 DESCRIPTION

Traffic signals flashing beacons lighting closed circuit television systems changeable message sign systems highway advisory radio system sign illumination electric service (irrigation) ramp metering systems traffic monitoring stations communication conduit sprinkler control conduit maintaining existing traffic management system elements during construction shall conform to the provisions in Section 86, "Electrical Systems," of the Standard Specifications and these special provisions.

2*. Delete if not needed. Edit for types of installation and where the locations are shown.

Locations of _____ installations are shown on the _____ plans.

Paras 3, 4 and 5: Identify Structures by name and number. Delete paragraph if not used.

3*

Lighting equipment is included in the following structures:

A. _____
B. _____

4*

Communication conduit is included in the following structures:

A. _____
B. _____

5*

Sprinkler control conduit is included in the following structures:

A. _____
B. _____

6*. Delete if there is only 1 location or less. Include other application types where work is performed at more than 1 location.

Traffic signal work shall be performed at the following locations:

A. _____
B. _____

USE WITH 2006 STANDARDS.
Use for projects that have lump sum item(s) for Electrical System work.

10-3.__ COST BREAK-DOWN

Cost break-downs shall conform to the provisions in Section 86-1.03, "Cost Break-Down," of the Standard Specifications and these special provisions.

2

The Engineer shall be furnished a cost break-down for each contract lump sum item of work described in this Section 10-3.

3*. District to determine number of days required for cost break-down submittal. Use 15 days unless otherwise specified.

The cost break-down shall be submitted to the Engineer for approval within __ days after the contract has been approved. The cost break-down shall be approved, in writing, by the Engineer before any partial payment for the items of electrical work will be made.

4*. List items to suit the project.

The cost break-down shall include the following items in addition to those listed in the Standard Specifications:

A. _____
B. _____
C. _____

USE WITH 2006 STANDARDS.

10-3.__ CONDUIT

1. Edit for type of conduit allowed.

Conduit to be installed underground shall be Type 1 or Type 3 unless otherwise specified.

2. Edit for type of conduit allowed.

The conduit in a foundation and between a foundation and the nearest pull box shall be Type 1 or Type 3.

Use Paras 3, 4, and 5 when applicable.

3. Edit for type of metal conduit if not Type 1.

When a standard coupling cannot be used for joining Type 1 conduit, a UL-listed threaded union coupling conforming to the provisions in Section 86-2.05C, "Installation," of the Standard Specifications, or a concrete-tight split coupling, or concrete-tight set screw coupling shall be used.

4. Delete if concrete backfill is not required.

When Type 3 conduit is placed in a trench (not in pavement or under portland cement concrete sidewalk), after the bedding material is placed and the conduit is installed, the trench shall be backfilled to not less than 4 inches above the conduit with minor concrete conforming to the provisions in Section 90-10, "Minor Concrete," of the Standard Specifications, except the concrete shall contain not less than 421 pounds of cementitious material per cubic yard. The remaining trench shall be backfilled to finished grade with backfill material.

5

Conduit runs shown on the plans to be located behind curbs may be installed in the street, within 3 feet of, and parallel with the face of the curb, by the trenching in pavement method in conformance with the provisions in Section 86-2.05C, "Installation," of the Standard Specifications. Pull boxes shall be located behind the curb or at the locations shown on the plans.

6. Edit as required.

After conductors have been installed, the ends of conduits terminating in pull boxes, service equipment enclosures, and controller cabinets shall be sealed with an approved type of sealing compound.

7. Use if, at conduit locations, the vertical location of existing high priority subsurface installations have not been determined by field survey. Delete Para 7 and "other" from Para 8 if no high priority subsurface installations exist.

At those locations where conduit is required to be installed under pavement and underground facilities designated as high priority subsurface installation under Govt Code § 4216 et seq. exist, conduit shall be placed by the trenching in pavement method in conformance with the provisions in Section 86-2.05C, "Installation," of the Standard Specifications.

8. The 5-minute delay to vehicles may be edited as required. For delays greater than 15 minutes, provide written approval from District Traffic Manager. Delete if not needed.

At other locations where conduit is required to be installed under pavement and if a delay to vehicles will not exceed 5 minutes, conduit may be installed by the "Trenching in Pavement Method."

9. Use when "T" trench detail is needed. Delete otherwise.

Use the "T" trench detail as shown on the plans.

10. May be used when structure pull boxes are on the project.

At the option of the Contractor, the final 2 feet of conduit entering a pull box in a reinforced concrete structure may be Type 4.

USE WITH 2006 STANDARDS.
Use when bottoms of pull boxes are NOT to be grouted.

10-3.__ PULL BOXES

Grout shall not be placed in the bottom of pull boxes.

USE WITH 2006 STANDARDS.
Use when applicable.

10-3.__ CONDUCTORS, CABLES, AND WIRING

1. Edit if either type is NOT allowed.

Splices shall be insulated by "Method B" or, at the Contractor's option, splices of conductors shall be insulated with heat-shrink tubing of the appropriate size after thoroughly painting the spliced conductors with electrical insulating coating.

2. Use in all Electrical projects. Do not edit.

Conductors shall be wrapped around projecting end of conduit in pull boxes, as shown on the plans. Cables shall be secured to the projecting end of conduit in pull boxes to prevent pulling of cables without removing the securing device.

3. Edit for cable type. Delete if not applicable.

Signal Interconnect Cable (SIC) shall be the 3-pair 6-pair type.

USE WITH 2006 STANDARDS.
Use for projects with new service equipment enclosures.

10-3.__ SERVICE

1. Delete when continuous welding of exterior seams in service equipment enclosures is required.

Continuous welding of exterior seams in service equipment enclosures is not required.

2. Use when corrosion is expected to be a problem.

Service equipment enclosures shall be the aluminum type.

3. Edit to describe required circuit-breaker mounting. Delete if not needed.

Circuit breakers shall be the cable-in/cable-out type, mounted on non-energized clips. All circuit breakers shall be mounted vertically with the up position of the handle being the "ON" position.

4. Use for projects with Model 500 changeable message signs.

Circuits with Model 500 changeable message signs shall have service equipment enclosures which have main busses and terminal lugs rated for 100 A, minimum, and a No. 2 bare copper ground wire.

5. Edit the circuit breaker rating as required by the service utility.

Each service shall be provided with up to 2 main circuit breakers which shall disconnect ungrounded service entrance conductors. Where the "Main" circuit breaker consists of 2 circuit breakers as shown on the plans or required in the special provisions, each of the circuit breakers shall have a minimum interrupting capacity of 10,000 A, rms.

6. Use when project is in District 11 or when required by the service utility.

Circuit breakers used as service disconnect equipment shall have a minimum interrupting capacity of 42,000 A, rms, for 120/240 V(ac) services and 30,000 A, rms, for 480 V(ac) services.

USE WITH 2006 STANDARDS.
Use for projects with electrical service (irrigation).
Add to SSP 86-190.
1. Edit as required.

ELECTRIC SERVICE (IRRIGATION)

Electric service (irrigation) shall be from the service points to the irrigation controllers (IC) and to the spaces provided in the irrigation controller enclosure cabinets (CEC) for irrigation controllers as shown on the plans.

2*. Edit or delete as applicable.

Irrigation Controller (IC) _____ : Electric service (irrigation) shall be a metered 120/240 V (ac), single-phase service with service disconnects in a NEMA Type 3R enclosure and surface mounted on the _____ pole. Service disconnects and metering equipment may be in a common enclosure if approved by the serving utility.

3*. Edit or delete as applicable.

Irrigation Controller (IC) _____ : Electric service (irrigation) shall be an unmetered 120/240 V (ac), single-phase service with service disconnects in a NEMA Type 3R enclosure and surface mounted on the _____ pole.

4*. Edit or delete as applicable.

Irrigation Controller (IC) _____ : A single-pole, 15-A circuit breaker shall be installed in the existing _____. The circuit breaker shall be of the same manufacturer and model and interrupting capacity as the existing circuit breakers.

5*. Edit or delete as applicable.

Irrigation Controller (IC) _____ : Electric service (irrigation) shall be _____ V (ac) obtained from the existing pull box.

6*. Edit or delete as applicable.

Irrigation Controller (IC) _____ : Electric service (irrigation) shall be a metered 120/240 V(ac), single-phase service in a Type III service equipment enclosure.

7*. Edit or delete as applicable.

Irrigation Controller (IC) _____ : Electric service (irrigation) shall be an unmetered 120/240 V(ac), single-phase service in a Type III service equipment enclosure.

8*

Service disconnects in service equipment enclosures shall be _____-pole, ____-A circuit breaker.

9*.

Nameplate inscriptions shall be as follows:

ITEMS	INSCRIPTION
Metering Equipment Enclosure	IC _____
Service Disconnect	IC _____

10

The inscription on other nameplates shall be the identifying letter designation used on the plans and in these special provisions, or shall be as directed by the Engineer.

Use Paras 11 and 12 only when electric service (irrigation) is paid for as a separate item.

11

Electric service (irrigation) will be paid for on a lump sum basis.

12*. Edit as required.

The contract lump sum price paid for electric service (irrigation) shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals, and for doing all the work involved in installing electric service (irrigation) for irrigation controllers, complete in place, including conductors, conduit and pull boxes to the pull box adjacent to irrigation controller enclosure cabinets and irrigation controllers, as shown on the plans, as specified in these special provisions, and as directed by the Engineer.

Use if Section 12, "Buildings," or Section 13, "Railroad Relations and Insurance," is included.

SECTION 11. (BLANK)

Use if building specifications are included. Insert building specifications after this title.

SECTION 12. BUILDINGS

Use if Section 13, "Railroad Relations and Insurance," is included and building specifications are not included.

SECTION 12. (BLANK)

Use if railroad clauses are included. Insert railroad clauses after this title.

SECTION 13. RAILROAD RELATIONS AND INSURANCE

USE WITH 2006 STANDARDS.
Do not include the Standard Plans List in the project plans. Division of Engineering Services, Office Engineer will add RSP and NSP sheets in the project plans, except for an AADD project, the District will add RSP and NSP sheets in the project plans. Sheet numbers are included on the Title Sheet Index under the heading, "Revised and New Standard Plans." Instructions for editing: Click in the left margin to select Standard Plan sheets to be included (the entire row must be selected). Use "StrikeHide no initials" key to select or undo a previous selection.

Standard Plans List

The Standard Plan sheets applicable to this contract include, but are not limited to those indicated below. Applicable Revised Standard Plans (RSP) and New Standard Plans (NSP) indicated below are included in the project plans as Standard Plan sheets.

ACRONYMS, ABBREVIATIONS AND SYMBOLS

A10A	**Acronyms and Abbreviations (Sheet 1 of 2)**
A10B	**Acronyms and Abbreviations (Sheet 2 of 2)**
A10C	**Symbols (Sheet 1 of 2)**
A10D	**Symbols (Sheet 2 of 2)**

~~**PAVEMENT MARKERS, TRAFFIC LINES, AND PAVEMENT MARKINGS**~~

~~**A20A**~~	~~**Pavement Markers and Traffic Lines, Typical Details**~~
~~**A20B**~~	~~**Pavement Markers and Traffic Lines, Typical Details**~~
~~**A20C**~~	~~**Pavement Markers and Traffic Lines, Typical Details**~~
~~**A20D**~~	~~**Pavement Markers and Traffic Lines, Typical Details**~~
~~**A24A**~~	~~**Pavement Markings – Arrows**~~
~~**A24B**~~	~~**Pavement Markings – Arrows**~~
~~**RSP A24C**~~	~~**Pavement Markings – Symbols and Numerals**~~
~~**A24D**~~	~~**Pavement Markings – Words**~~
~~**A24E**~~	~~**Pavement Markings – Words and Crosswalks**~~

~~**RUMBLE STRIP**~~

~~**A40A**~~	~~**Shoulder Rumble Strip Details – Rolled-In Indentations**~~
~~**A40B**~~	~~**Shoulder Rumble Strip Details – Ground-In Indentations**~~

~~**EXCAVATION AND BACKFILL**~~

~~**A62A**~~	~~**Excavation and Backfill – Miscellaneous Details**~~
~~**A62B**~~	~~**Limits of Payment for Excavation and Backfill – Bridge Surcharge and Wall**~~

A62C	Limits of Payment for Excavation and Backfill – Bridge
A62D	Excavation and Backfill – Concrete Pipe Culverts
RSP A62DA	Excavation and Backfill – Concrete Pipe Culverts
A62E	Excavation and Backfill – Cast-In-Place Reinforced Concrete Box and Arch Culverts
A62F	Excavation and Backfill – Metal and Plastic Culverts
	PORTABLE CONCRETE BARRIER
A63A	Portable Concrete Barrier (Type 60K)
A63B	Portable Concrete Barrier (Type 60K)
	OBJECT MARKERS, DELINEATORS, CHANNELIZERS AND BARRICADES
A73A	Object Markers
A73B	Markers
A73C	Delineators, Channelizers and Barricades
	SURVEY MONUMENTS
RSP A74	Survey Monuments
	CONCRETE BARRIER TYPE 60 SERIES
RSP A76A	Concrete Barrier Type 60
A76B	Concrete Barrier Type 60
A76C	Concrete Barrier Type 60E
A76D	Concrete Barrier Type 60G
A76E	Concrete Barrier Type 60G
A76F	Concrete Barrier Type 60GE
A76G	Concrete Barrier Type 60S
A76H	Concrete Barrier Type 60S
A76I	Concrete Barrier Type 60SE
	CONCRETE BARRIER WILDLIFE PASSAGEWAY
RSP A76J	Concrete Barrier – Wildlife Passageway (Type S)
A76K	Concrete Barrier – Wildlife Passageway (Type M)
A76L	Concrete Barrier – Wildlife Passageway (Type L)
	METAL BEAM GUARD RAILING – STANDARD RAILING SECTIONS
A77A1	Metal Beam Guard Railing – Standard Railing Section (Wood Post with Wood Block)
A77A2	Metal Beam Guard Railing – Standard Railing Section (Steel Post with Notched Wood or Notched Recycled Plastic Block)
A77B1	Metal Beam Guard Railing – Standard Hardware
A77C1	Metal Beam Guard Railing – Wood Post and Wood Block Details
A77C2	Metal Beam Guard Railing Steel Post, Notched Wood Block and Notched Recycled Plastic Block Details
A77C3	Metal Beam Guard Railing – Typical Line Post Embedment and Hinge Point Offset Details
RSP A77C4	Metal Beam Guard Railing – Typical Railing Delineation and Dike

	Positioning Details
NSP A77C5	Metal Beam Guard Railing – Typical Vegetation Control Standard Railing Section
NSP A77C6	Metal Beam Guard Railing – Typical Vegetation Control for Terminal System End Treatments
NSP A77C7	Metal Beam Guard Railing – Typical Vegetation Control at Structure Approach and Departure
NSP A77C8	Metal Beam Guard Railing – Typical Vegetation Control at Fixed Object
NSP A77C9	Metal Beam Guard Railing – Typical Vegetation Control at Fixed Object
NSP A77C10	Metal Beam Guard Railing – Typical Vegetation Control at Fixed Object
	METAL BEAM GUARD RAILING – TYPICAL LAYOUTS FOR EMBANKMENTS
RSP A77E1	Metal Beam Guard Railing – Typical Layouts for Embankments
RSP A77E2	Metal Beam Guard Railing – Typical Layouts for Embankments
RSP A77E3	Metal Beam Guard Railing – Typical Layouts for Embankments
RSP A77E4	Metal Beam Guard Railing – Typical Layouts for Embankments
RSP A77E5	Metal Beam Guard Railing – Typical Layouts for Embankments
RSP A77E6	Metal Beam Guard Railing – Typical Layouts for Embankments
	METAL BEAM GUARD RAILING – TYPICAL LAYOUTS FOR STRUCTURES
RSP A77F1	Metal Beam Guard Railing – Typical Layouts for Structure Approach
A77F2	Metal Beam Guard Railing – Typical Layouts for Structure Approach and Between Structures
RSP A77F3	Metal Beam Guard Railing – Typical Layouts for Structure Approach
RSP A77F4	Metal Beam Guard Railing – Typical Layouts for Structure Departure
A77F5	Metal Beam Guard Railing – Typical Layouts for Structure Departure
	METAL BEAM GUARD RAILING – TYPICAL LAYOUTS FOR FIXED OBJECTS
RSP A77G1	Metal Beam Guard Railing – Typical Layouts for Fixed Objects between Separate Roadbeds (Two-Way Traffic)
RSP A77G2	Metal Beam Guard Railing – Typical Layouts for Fixed Objects between Separate Roadbeds (One-Way Traffic)
RSP A77G3	Metal Beam Guard Railing – Typical Layouts for Roadside Fixed Objects
RSP A77G4	Metal Beam Guard Railing – Typical Layouts for Roadside Fixed Objects
RSP A77G5	Metal Beam Guard Railing – Typical Layouts for Roadside Fixed Objects
RSP A77G6	Metal Beam Guard Railing – Typical Layouts for Roadside Fixed Objects
RSP A77G7	Metal Beam Guard Railing – Typical Layouts for Roadside Fixed Objects
RSP A77G8	Metal Beam Guard Railing – Typical Layouts for Roadside Fixed Objects
	METAL BEAM GUARD RAILING – END ANCHORAGE AND RAIL TENSIONING ASSEMBLY
A77H1	Metal Railing – End Anchor Assembly (Type SFT)
A77H2	Metal Railing – Rail Tensioning Assembly
A77H3	Metal Railing – Anchor Cable and Anchor Plate Details

A77I1	Metal Railing – End Anchor Assembly (Type CA)
A77I2	Metal Beam Guard Railing – Buried Post End Anchor
	METAL BEAM GUARD RAILING – CONNECTIONS DETAILS AND TRANSITION RAILING TO BRIDGE RAILINGS, ABUTMENTS AND WALLS
RSP A77J1	Metal Beam Guard Railing – Connections to Bridge Railings without Sidewalks Details No. 1
RSP A77J2	Metal Beam Guard Railing – Connections to Bridge Railings without Sidewalks Details No. 2
A77J3	Metal Beam Guard Railing – Connections to Abutments and Walls
RSP A77J4	Metal Beam Guard Railing – Transition Railing (Type WB)
A77K1	Metal Beam Guard Railing – Connections to Bridge Railings with Sidewalks Details No. 1
A77K2	Metal Beam Guard Railing – Connections to Bridge Railings with Sidewalks Details No. 2
	METAL BEAM GUARD RAILING – TERMINAL SYSTEM END TREATMENT
A77L1	Metal Beam Railing – Terminal System (Type SRT)
A77L2	Metal Beam Railing – Terminal System (Type SKT)
A77L3	Metal Beam Railing – Terminal System (Type ET)
A77L4	Metal Beam Railing – Terminal System (Type CAT)
A77L5	Metal Beam Railing – Terminal System (Type FLEAT)
	THRIE BEAM BARRIER – STANDARD BARRIER SECTIONS
A78A	Thrie Beam Barrier – Standard Barrier Railing Section (Wood Post with Wood Block)
RSP A78B	Thrie Beam Barrier – Standard Barrier Railing Section (Steel Post with Notched Wood Block or Notched Recycled Plastic Block)
RSP A78C1	Thrie Beam Barrier – Standard Hardware Details
A78C2	Thrie Beam Barrier – Post and Block Details
NSP A78C3	Single Thrie Beam Barrier – Typical Vegetation Control Standard Barrier Railing Section
NSP A78C4	Double Thrie Beam Barrier – Typical Vegetation Control Standard Barrier Railing Section
NSP A78C5	Thrie Beam Barrier – Typical Vegetation Control at Fixed Objects in Median
NSP A78C6	Thrie Beam Barrier – Typical Vegetation Control at Structure Approach
	THRIE BEAM BARRIER AT FIXED OBJECTS AND ON BRIDGE
A78D1	Thrie Beam Barrier – at Fixed Objects in Median
A78D2	Double Thrie Beam Barrier – on Bridge
	THRIE BEAM BARRIER – END ANCHORAGE END TREATMENT AND EMERGENCY PASSEAGEWAY
A78E1	Single Thrie Beam Barrier – End Anchor Assembly and Terminal System End Treatment
A78E2	Double Thrie Beam Barrier – Emergency Passageway and End Anchor

	Assembly Details
A78E3	Double Thrie Beam Barrier – Crash Cushion End Treatment
	THRIE BEAM BARRIER – CONNECTIONS TO BRIDGE RAILINGS, ABUTMENTS, WALLS AND BARRIER
RSP A78F1	Double Thrie Beam Barrier – Connection to Bridge Railings without Sidewalks
RSP A78F2	Single Thrie Beam Barrier – Connections to Bridge Railings without Sidewalks
A78G	Single Thrie Beam Barrier – Connections to Abutments and Walls
RSP A78H	Thrie Beam Barrier – Typical Layout for Connection to Bridge Railing
RSP A78I	Double Thrie Beam Barrier – Connection to Concrete Barrier
	THRIE BEAM BARRIER – TRANSITION RAILING
RSP A78J	Single Thrie Beam Barrier – Transition Railing (Type STB)
A78K	Double Thrie Beam Barrier – Transition Railing (Type DTB)
	CRASH CUSHIONS
RSP A81A	Crash Cushion, Sand Filled (Unidirectional)
RSP A81B	Crash Cushion, Sand Filled (Unidirectional)
RSP A81C	Crash Cushion, Sand Filled (Bidirectional)
A82A1	Crash Cushion (Type CAT)
A82B1	Crash Cushion (Type ADIEM)
RSP A82C1	Crash Cushion (Type React 9CBB)
A82C2	Crash Cushion (Type React 9CBB) – Backup Block Details
A82C3	Crash Cushion (Type React 9CBB) – Concrete Barrier Transition Details
A82D1	Crash Cushion (Type React 9SCBS)
RSP A82D2	Crash Cushion (Type React 9SCBS) – Connection to Concrete Barrier
A82D3	Crash Cushion (Type React 9SCBS) – Alignment Offset Details
A82D4	Crash Cushion (Type React 62B060)
	FENCES
RSP A85	Chain Link Fence
NSP A85A	Chain Link Fence Details
NSP A85B	Chain Link Fence Details
A86	Barbed Wire and Wire Mesh Fences
NSP A86A	Barbed Wire and Wire Mesh Fence Detail on Sharp Break in Grade
NSP A86B	Barbed Wire and Wire Mesh Fence Details
NSP A86C	Barbed Wire and Wire Mesh Fence Details at Ditch Crossing
	CURBS, DRIVEWAYS, DIKES, CURB RAMPS AND ACCESSIBLE PARKING
RSP A87A	Curbs and Driveways
A87B	Asphalt Concrete Dikes
RSP A88A	Curb Ramp Details
A88B	Curb Ramp and Island Passageway Details
RSP A90A	Accessible Parking – Off-Street

RSP A90B	Accessible Parking – On-Street
	PAVEMENTS
RSP P1	Jointed Plain Concrete Pavement
RSP P2	Jointed Plain Concrete Pavement – Widened Slab Details
RSP P3	Jointed Plain Concrete Pavement – Nondoweled Shoulder Addition/Reconstruction
RNSP P4	Continuously Reinforced Concrete Pavement
P7	Dowel Bar Retrofit (Existing Concrete Jointed Plain Pavement)
RSP P8	Jointed Plain Concrete Pavement – Individual Slab Replacement
RSP P10	Concrete Pavement – Dowel Bar Details
RSP P12	Concrete Pavement – Dowel Bar Basket Details
NSP P13	Continuously Reinforced Concrete Pavement – Single Piece Transverse Bar Assembly
RSP P17	Concrete Pavement – Tie Bar Basket Details
RSP P18	Concrete Pavement – Lane Schematics and Isolation Joint Detail
RSP P20	Concrete Pavement – Joint Details
RSP P30	Jointed Plain Concrete Pavement – End Panel Pavement Transitions
NSP P31 (Canceled)	CANCELED ON JUNE 5, 2009
NSP P31A	Continuously Reinforced Concrete Pavement – Terminal Joint Details
NSP P31B	Continuously Reinforced Concrete Pavement – Expansion Joint and Anchor Details
NSP P32A	Continuously Reinforced Concrete Pavement – Wide Flange Beam Terminals
NSP P32B	Continuously Reinforced Concrete Pavement – Wide Flange Beam Terminals
P33	Concrete Pavement – Lane Drop Paving Details
NSP P34	Concrete Pavement – Lane Drop Paving Details No. 2
RSP P35	Concrete Pavement – Ramp Transition Paving Details
RSP P45	Concrete Pavement – Drainage Inlet Details No. 1
RSP P46	Concrete Pavement – Drainage Inlet Details No. 2
P70	Asphalt Concrete Paving (Longitudinal Tapered Notched Wedge Joint)
	CRIB WALLS
C7A	Reinforced Concrete Crib Wall – Battered Wall – Types A, B and C
C7B	Reinforced Concrete Crib Wall – Battered Wall – Types D, E and F
C7C	Reinforced Concrete Crib Wall – Vertical Wall – Types A, B and C
C7D	Reinforced Concrete Crib Wall – Vertical Wall – Types D, E and F
C7E	Reinforced Concrete Crib Wall – Types A, B, C, D, E and F – Header and Stretcher Details
C7F	Design Data for Reinforced Concrete Crib Wall – Foundation Pressure – Battered Wall
C7G	Reinforced Concrete Crib Wall – Foundation Pressure – Vertical Wall

C8A	Steel Crib Wall Construction Details
C8B	Steel Crib Wall – Design Data
C8C	Steel Crib Wall – Design Data
C9A	Timber Crib Wall – Types A, B, C and D
C9B	Timber Crib Wall – Types A, B, C and D – Design Data
	DRAINAGE INLETS, PIPE INLETS AND GRATES
NSP D71	Drainage Inlet Markers
D72	Drainage Inlets
D73	Drainage Inlets
NSP D73A	Drainage Inlets (Precast)
D74A	Drainage Inlets
RSP D74B	Drainage Inlets
D74C	Drainage Inlets Details
D75A	Steel Pipe Inlets
RSP D75B	Concrete Pipe Inlets
D75C	Pipe Inlets – Ladder and Trash Rack Details
RSP D77A	Grate Details
D77B	Bicycle Proof Grate Details
D77C	Alternative Hinged Cover for Type OL and OS Inlets and Trash Rack for Type OCP Inlet
	GUTTER AND INLET DEPRESSIONS
D78A	Gutter Depressions
D78B	Inlet Depressions – Concrete Shoulders
D78C	Inlet Depressions – Asphalt Concrete Shoulders
	CONCRETE PIPE – DIRECT DESIGN METHOD
D79	Precast Reinforced Concrete Pipe – Direct Design Method
	BOX CULVERTS
D80	Cast-In-Place Reinforced Concrete – Single Box Culvert
D81	Cast-In-Place Reinforced Concrete – Double Box Culvert
D82	Cast-In-Place Reinforced Concrete Box Culvert – Miscellaneous Details
D84	Box Culvert Wingwalls – Types A, B and C
D85	Box Culvert Wingwalls – Types D and E
D86A	Box Culvert Warped Wingwalls
	PIPE AND ARCH CULVERT – ENDWALLS AND WARPED WINGWALLS
D86B	Pipe Culvert Headwalls, Endwalls and Warped Wingwalls
D86C	Arch Culvert Headwalls, Endwalls and Warped Wingwalls
	PIPE DOWNDRAINS, ANCHORAGE SYSTEMS AND OVERSIDE DRAINS
D87A	Corrugated Metal Pipe Downdrain Details
D87B	Plastic Pipe Downdrain Details
D87C	Cable Anchorage System

D87D	Overside Drains
	CONSTRUCTION LOADS ON CULVERTS AND STRUT DETAILS
D88	Construction Loads on Culverts
D88A	Strut Details for Structural Steel Pipes, Arches and Vehicular Undercrossing
	PIPE HEADWALLS, ENDWALLS AND WINGWALLS
D89	Pipe Culver Headwalls – Straight and "L"
D90	Pipe Culvert Headwalls, Endwalls and Wingwalls – Types A, B and C
	PIPE RISER AND DRAINAGE INLET RISER CONNECTIONS
D93A	Pipe Riser Connections
D93B	Drainage Inlet Riser Connections
D93C	Pipe Riser with Debris Rack Cage
	FLARED END SECTIONS
D94A	Metal and Plastic Flared End Sections
D94B	Concrete Flared End Sections
	PIPE COUPLING AND JOINT DETAILS
D97A	Corrugated Metal Pipe Coupling Details No. 1 – Annular Coupling Band Bar and Strap and Angle Connections
D97B (Canceled)	CANCELED ON JUNE 6, 2008
D97C	Corrugated Metal Pipe Coupling Details No. 3 – Helical and Universal Couplers
RSP D97D	Corrugated Metal Pipe Coupling Details No. 4 – Hugger Coupling Bands
RSP D97E	Corrugated Metal Pipe Coupling Details No. 5 – Standard Joint
RSP D97F	Corrugated Metal Pipe Coupling Details No. 6 – Positive Joint
RSP D97G	Corrugated Metal Pipe Coupling Details No. 7 – Downdrain
D97H	Reinforced Concrete Pipe or Non-Reinforced Concrete Pipe – Standard and Positive Joints
NSP D97I	Corrugated Polyvinyl Chloride Pipe with Smooth Interior – Standard and Positive Joints
NSP D97J	Composite Steel Spiral Rib Pipe with Smooth Interior – Standard Joint
	SLOTTED AND GRATED LINE DRAINS
D98A	Slotted Corrugated Steel Pipe Drain Details
D98B	Slotted Corrugated Steel Pipe Drain Details
D98C	Grated Line Drain Details
NSP D98D	Slotted Plastic Pipe Drain Details
NSP D98E	Heel Resistant Grate for Slotted Plastic Pipe Drain
	STRUCTURAL SECTION DRAINS
D99A	Structural Section Drainage System Details
D99B	Edge Drain Outlet and Vent Details
D99C	Edge Drain Cleanout and Vent Details
D99D	Cross Drain Interceptor Details

~~GABIONS AND UNDERDRAINS~~

~~D100A~~	~~Gabion Basket Details No. 1~~
~~D100B~~	~~Gabion Basket Details No. 2~~
~~D102~~	~~Underdrains~~

~~PLANTING AND IRRIGATION~~

~~RSP H1~~	~~Planting and Irrigation – Abbreviations~~
~~RSP H2~~	~~Planting and Irrigation – Symbols~~
~~H3~~	~~Planting and Irrigation Details~~
~~H4~~	~~Planting and Irrigation Details~~
~~RSP H5~~	~~Planting and Irrigation Details~~
~~H6~~	~~Planting and Irrigation Details~~
~~RSP H7~~	~~Planting and Irrigation Details~~
~~RSP H8~~	~~Planting and Irrigation Details~~
~~H9~~	~~Planting and Irrigation Details~~
~~H10~~	~~Irrigation Controller Enclosure Cabinet~~

~~EROSION CONTROL~~

~~RNSP H51~~	~~Erosion Control Details (Fiber Roll)~~
~~NSP H52~~	~~Erosion Control Details (Compost Sock)~~
~~NSP H53~~	~~Rolled Erosion Control Product~~
~~NSP H54 (Canceled)~~	~~CANCELED ON JULY 31, 2009~~

TEMPORARY CRASH CUSHIONS, RAILING AND TRAFFIC SCREEN

RSP T1A	**Temporary Crash Cushion, Sand Filled (Unidirectional)**
RSP T1B	**Temporary Crash Cushion, Sand Filled (Bidirectional)**
RSP T2	**Temporary Crash Cushion, Sand Filled (Shoulder Installations)**
T3	**Temporary Railing (Type K)**
~~T4~~	~~Temporary Traffic Screen~~
~~T5~~	~~Temporary Terminal Section (Type K)~~

~~PROJECT FUNDING SIGNS~~

~~RSP T7~~	~~Construction Project Funding Identification Signs~~

~~TEMPORARY TRAFFIC CONTROL SYSTEMS~~

~~T10~~	~~Traffic Control System for Lane Closure On Freeways and Expressways~~
~~T10A~~	~~Traffic Control System for Lane and Complete Closures on Freeways and Expressways~~
~~T11~~	~~Traffic Control System for Lane Closure on Multilane Conventional Highways~~
~~T12~~	~~Traffic Control System for Lane Closure on Multilane Conventional Highways~~
~~T13~~	~~Traffic Control System for Lane Closure on Two Lane Conventional Highways~~
~~T14~~	~~Traffic Control System for Ramp Closure~~

T15	Traffic Control System for Moving Lane Closure on Multilane Highways
T16	Traffic Control System for Moving Lane Closure on Multilane Highways
T17	Traffic Control System for Moving Lane Closure on Two Lane Highways

TEMPORARY WATER POLLUTION CONTROL

T51	Temporary Water Pollution Control Details (Temporary Silt Fence)
T52	Temporary Water Pollution Control Details (Temporary Straw Bale Barrier)
T53	Temporary Water Pollution Control Details (Temporary Cover)
T54	Temporary Water Pollution Control Details (Temporary Erosion Control Blanket)
T55	Temporary Water Pollution Control Details (Temporary Erosion Control Blanket)
RSP T56	Temporary Water Pollution Control Details (Temporary Fiber Roll)
T57	Temporary Water Pollution Control Details (Temporary Check Dam)
T58	Temporary Water Pollution Control Details (Temporary Construction Entrance)
T59	Temporary Water Pollution Control Details (Temporary Concrete Washout Facility)
NSP T60	Temporary Water Pollution Control Details (Temporary Reinforced Silt Fence)
NSP T61	Temporary Water Pollution Control Details (Temporary Drainage Inlet Protection)
NSP T62	Temporary Water Pollution Control Details (Temporary Drainage Inlet Protection)
NSP T63	Temporary Water Pollution Control Details (Temporary Drainage Inlet Protection)
NSP T64	Temporary Water Pollution Control Details (Temporary Drainage Inlet Protection)
NSP T65	Temporary Water Pollution Control Details [Temporary Fence (Type ESA)]
NSP T66	Temporary Water Pollution Control Details (Temporary Large Sediment Barrier)
NSP T67	Temporary Water Pollution Control Details (Temporary Construction Roadway)

BRIDGE DETAILS

B0-1	Bridge Details
B0-3	Bridge Details
B0-5	Bridge Details
B0-13	Bridge Details

PILES

B2-3	16" and 24" Cast-In-Drilled-Hole Concrete Pile
B2-5	Pile Details – Class 90 and Class 140
RSP B2-8	Pile Details – Class 200

B2-9	Load Test Pile Details (1)
B2-10	Load Test Pile Details (2)
B2-11	Load Test Pile Details (3)
	RETAINING WALLS
B3-1	Retaining Wall Type 1 – H = 4' through 30'
B3-2	Retaining Wall Type 1 – H = 32' through 36'
B3-3	Retaining Wall Type 1A
B3-4	Retaining Wall Type 2
B3-5	Counterfort Retaining Wall Type 3
B3-6	Counterfort Retaining Wall Type 4
B3-7	Retaining Wall Type 5
B3-8	Retaining Wall Details No. 1
B3-9	Retaining Wall Details No. 2
B3-11	Retaining Wall Type 6 – 6'-0" Maximum
	T-BEAM DETAILS
B6-1	T-Beam Details
B6-10	Utility Openings, T-Beam
	JOINT SEALS
RSP B6-21	Joint Seals (Maximum Movement Rating = 2")
	BOX GIRDER DETAILS
B7-1	Box Girder Details
	DECK DRAINS
B7-5	Deck Drains
B7-6	Deck Drains – Types D-1 and D-2
B7-7	Deck Drains – Type D-3
B7-8	Deck Drainage Details
	UTILITY OPENING
B7-10	Utility Opening – Box Girder
B7-11	Utility Details
	CAST-IN-PLACE PRESTRESSED GIRDER
B8-5	Cast-In-Place Prestressed Girder Details
	CHAIN LINK RAILING, CABLE RAILING AND TUBULAR HAND RAILING
B11-7	Chain Link Railing
B11-47	Cable Railing
B11-51	Tubular Hand Railing
B11-52	Chain Link Railing Type 7
	BRIDGE CONCRETE BARRIERS
B11-53	Concrete Barrier Type 25
B11-54	Concrete Barrier Type 26
B11-55	Concrete Barrier Type 732
B11-56	Concrete Barrier Type 736

~~B11-57~~	~~Concrete Barrier Type 742~~
~~RSP B11-60~~	~~Concrete Barrier Type 80 (Sheet 1 of 2)~~
~~B11-61~~	~~Concrete Barrier Type 80 (Sheet 2 of 2)~~
~~RSP B11-62~~	~~Concrete Barrier Type 80SW (Sheet 1 of 3)~~
~~B11-63~~	~~Concrete Barrier Type 80SW (Sheet 2 of 3)~~
~~RSP B11-64~~	~~Concrete Barrier Type 80SW (Sheet 3 of 3)~~
	~~BRIDGE METAL RAIL BARRIERS~~
~~B11-65~~	~~California ST-30 Bridge Rail~~
~~RSP B11-66~~	~~California ST-40 Bridge Rail (Sheet 1 of 2)~~
~~RSP B11-67~~	~~California ST-40 Bridge Rail (Sheet 2 of 2)~~
~~RSP B11-68~~	~~California ST-10 Bridge Rail (Sheet 1 of 3)~~
~~B11-69~~	~~California ST-10 Bridge Rail (Sheet 2 of 3)~~
~~B11-70~~	~~California ST-10 Bridge Rail (Sheet 3 of 3)~~
	~~STRUCTURAL STEEL PLATE VEHICULAR UNDERCROSSING~~
~~B14-1~~	~~Structural Steel Plate Vehicular Undercrossing~~
	~~COMMUNICATION AND SPRINKLER CONTROL CONDUITS (BRIDGE)~~
~~B14-3~~	~~Communication and Sprinkler Control Conduits (Conduit Less Than 4")~~
	~~WATER SUPPLY LINE (BRIDGE)~~
~~B14-4~~	~~Water Supply Line (Bridge) (Pipe Sizes Less Than 4")~~
~~B14-5~~	~~Water Supply Line (Details) (Pipe Sizes Less Than 4")~~
	~~SOUND WALLS~~
~~RSP B15-1~~	~~Sound Wall Masonry Block on Footing Detail (1)~~
~~B15-2~~	~~Sound Wall Masonry Block on Footing Detail (2)~~
~~B15-3~~	~~Sound Wall Masonry Block on Pile Cap Detail (1)~~
~~RSP B15-4~~	~~Sound Wall Masonry Block on Pile Cap Detail (2)~~
~~RSP B15-5~~	~~Sound Wall Masonry Block on Pile Cap Detail (3)~~
~~RSP B15-6~~	~~Sound Wall Masonry Block on Type 736S/SV Barrier Details (1)~~
~~RSP B15-7~~	~~Sound Wall Masonry Block on Type 736S/SV Barrier Details (2)~~
~~RSP B15-8~~	~~Sound Wall Masonry Block on Type 736S/SV Barrier Details (3)~~
~~B15-9~~	~~Sound Wall Masonry Block Miscellaneous Details~~
~~B15-10~~	~~Sound Wall Masonry Block on Footing or Pile Cap 5'-0" Access Gate Detail (1)~~
~~B15-11~~	~~Sound Wall Masonry Block on Footing or Pile Cap 5'-0" Access Gate Details (2)~~
~~B15-12~~	~~Sound Wall Masonry Block on Barrier 5'-0" Access Gate Details (1)~~
~~B15-13~~	~~Sound Wall Masonry Block on Barrier 5'-0" Access Gate Details (2)~~
~~B15-14~~	~~Sound Wall Masonry Block Access Gate Locking Details~~
~~RSP B15-15~~	~~Sound Wall Masonry Block on Type 736S/SV Barrier on Pile Footing for Spanning Utilities~~
	ROADSIDE SIGNS
RS1	**Roadside Signs, Typical Installation Details No. 1**

RS2	**Roadside Signs – Wood Post, Typical Installation Details No. 2**
~~**RS3**~~	~~**Roadside Signs – Laminated Wood Box Post Typical Installation Details No. 3**~~
RS4	**Roadside Signs, Typical Installation Details No. 4**
	~~**OVERHEAD SIGNS (TRUSS)**~~
~~**S1**~~	~~**Overhead Signs – Truss, Instructions and Examples**~~
~~**S2**~~	~~**Overhead Signs – Truss, Single Post Type – Post Type II thru IX**~~
~~**S3**~~	~~**Overhead Signs – Truss, Single Post Type – Base Plate and Anchorage Details**~~
~~**S4**~~	~~**Overhead Signs – Truss, Single Post Type – Structural Frame Members Details No. 1**~~
~~**S5**~~	~~**Overhead Signs – Truss, Single Post Type – Structural Frame Members Details No. 2**~~
~~**S6**~~	~~**Overhead Signs – Truss, Gusset Plate Details**~~
~~**S7**~~	~~**Overhead Signs – Truss, Single Post Type – Square Pedestal Pile Foundation**~~
~~**S8**~~	~~**Overhead Signs – Truss, Single Post Type – Round Pedestal Pile Foundation**~~
~~**S9**~~	~~**Overhead Signs – Truss, Two Post Type – Post Types I-S thru VII-S**~~
~~**S10**~~	~~**Overhead Signs – Truss, Two Post Type – Base Plate and Anchorage Details**~~
~~**S11**~~	~~**Overhead Signs – Truss, Two Post Type – Structural Frame Members**~~
~~**S12**~~	~~**Overhead Signs – Truss, Structural Frame Details**~~
~~**S13**~~	~~**Overhead Signs – Truss, Frame Juncture Details**~~
~~**S14**~~	~~**Overhead Signs – Truss, Two Post Type – Square Pedestal Foundation**~~
~~**S15**~~	~~**Overhead Signs – Truss, Two Post Type – Round Pedestal Foundation**~~
~~**S16**~~	~~**Overhead Signs – Walkway Details No. 1**~~
~~**S17**~~	~~**Overhead Signs – Walkway Details No. 2**~~
~~**S17A**~~	~~**Overhead Signs – Walkway Details No. 3**~~
~~**S18**~~	~~**Overhead Signs – Walkway Safety Railing Details**~~
~~**S19**~~	~~**Overhead Signs – Truss, Sign Mounting Details – Laminated Panel – Type A**~~
~~**S20**~~	~~**Overhead Signs – Steel Frames – Removable Sign Panel Frames**~~
~~**S21**~~	~~**Overhead Signs – Removable Sign Panel Frames Mounting Details**~~
~~**S22**~~	~~**Overhead Signs – Truss, Removable Sign Panel Frames – 110" and 120" Sign Panels**~~
	~~**OVERHEAD SIGNS (TUBULAR)**~~
~~**S30**~~	~~**Overhead Signs – Tubular, Instructions and Examples**~~
~~**S31**~~	~~**Overhead Signs – Tubular, Single Post Type – Layout and Pipe Selection**~~
~~**S32**~~	~~**Overhead Signs – Tubular, Two Post Type – Layout and Pipe Selection**~~
~~**S33**~~	~~**Overhead Signs – Tubular, Structural Frame – Details No. 1**~~
~~**S34**~~	~~**Overhead Signs – Tubular, Structural Frame – Details No. 2**~~

S35 Overhead Signs – Tubular, Single and Two Post Type – Base Plate and Anchorage Details

S36 Overhead Signs – Tubular, Single Post and Two Post Type – Square Pedestal Pile Foundation

S37 Overhead Signs – Tubular, Single Post and Two Post Type – Round Pedestal Pile Foundation

OVERHEAD SIGNS (LIGHTWEIGHT)

S41 Overhead Signs – Lightweight Balanced – Single Steel Post Connection and Mounting Details

S42 Overhead Signs – Lightweight Balanced – Single Steel Post Details

S43 Overhead Signs – Lightweight, Type A, Connection Details

S44 Overhead Signs – Lightweight, Type B, Connection Details

S45 Overhead Signs – Lightweight, Type C, Connection Details

S46 Overhead Signs – Lightweight, Sign Panel Mounting Details, Laminated Panel – Type A

S47 Overhead Signs – Lightweight, Light Fixture Mounting Details

S48 Overhead Signs – Lightweight Post Details

S49 Overhead Signs – Lightweight Foundation Details

OVERHEAD AND ROADSIDE SIGNS PANELS

S81 Overhead Laminated Sign – Single or Multiple Panel, Type A (1" Thick)

S82 Roadside Laminated Sign – Single or Multiple Panel, Type B (1" Thick)

S83 Roadside Laminated Sign – Single or Multiple Panel, Type B (2-1/2" Thick)

S84 Roadside Laminated Sign – Single or Multiple Panel, Type H (2-1/2" Thick)

S85 Seam Closure, "H" Section Extrusion and Post Spacing Tables, Multi-Horizontal Laminated Panel Aluminum Signs

S86 Laminated Panel Details – Extrusions for Type A, B and H Panels

S87 Type A-1 Mounting Hardware – Overhead Laminated Type A Panel, Truss and Lightweight Sign Structures

S88 Type A-2 Mounting Hardware – Overhead Laminated Type A Panel, Bridge Mounted and Tubular Sign Structures

S89 Roadside Sign – Formed Single Sheet Aluminum Panel

S90 Channel and Bolt Hole Location, Overhead Formed Sign Panel

S91 Overhead Sign – Formed Sign Panel, Type A-3 Mounting Hardware

S92 Overhead Formed Sign Panel

S93 Framing Details for Framed Single Sheet Aluminum Signs, Rectangular Shape

S94 Roadside Framed Single Sheet Aluminum Signs, Rectangular Shape

S95 Roadside Single Sheet Aluminum Signs, Diamond Shape

OVERHEAD SIGN – CHANGEABLE MESSAGE SIGN (MODEL 500)

S101 Overhead Sign – Truss, Single Post Type, Layout, Unbalanced Butterfly Changeable Message Signs, Model 500

~~S102 Overhead Sign – Truss, Single Post Type, Structural Frame Details, Unbalanced Butterfly Changeable Message Signs, Model 500~~

~~S103 Overhead Sign – Truss, Single Post Type, Plan and Upper Bolt Details, Unbalanced Butterfly Changeable Message Signs, Model 500~~

~~S104 Overhead Sign – Truss, Single Post Type, Frame Juncture Details, Unbalanced Butterfly Changeable Message Signs, Model 500~~

~~S105 Overhead Sign – Truss, Single Post Type, Layout, Balanced Butterfly Changeable Message Signs, Model 500~~

~~S106 Overhead Sign – Truss, Single Post Type, Structural Frame Details, Balanced Butterfly Changeable Message Signs, Model 500~~

~~S107 Overhead Sign – Truss, Single Post Type, Plan and Upper Bolt Details, Balanced Butterfly Changeable Message Signs, Model 500~~

~~S108 Overhead Sign – Truss, Single Post Type, Frame Juncture Details, Balanced Butterfly Changeable Message Signs, Model 500~~

~~S109 Overhead Sign – Truss, Single Post Type, Layout, Full Cantilever Changeable Message Signs, Model 500~~

~~S110 Overhead Sign – Truss, Single Post Type, Structural Frame Details, Full Cantilever Changeable Message Signs, Model 500~~

~~S111 Overhead Sign – Truss, Single Post Type, Plan and Upper Bolt Details, Full Cantilever Changeable Message Signs, Model 500~~

~~S112 Overhead Sign – Truss, Single Post Type, Frame Juncture Details, Full Cantilever Changeable Message Signs, Model 500~~

~~S113 Overhead Sign – Truss, Single Post Type, Mounting Details, Changeable Message Signs, Model 500~~

~~S114 Overhead Sign – Truss, Single Post Type, Walkway Details, Changeable Message Signs, Model 500~~

~~S115 Overhead Sign – Truss, Single Post Type, Anchorage and Base Plate Details, Changeable Message Signs, Model 500~~

~~S116 Overhead Sign – Truss, Single Post Type, Foundation And Miscellaneous Details, Changeable Message Signs, Model 500~~

~~OVERHEAD SIGN – CHANGEABLE MESSAGE SIGN (MODEL 510)~~

~~S120 Overhead Sign – Truss, Single Post Type, Layout, Unbalanced Butterfly Changeable Message Signs, Model 510~~

~~S121 Overhead Sign – Truss, Single Post Type, Structural Frame Details, Unbalanced Butterfly Changeable Message Signs, Model 510~~

~~S122 Overhead Sign – Truss, Single Post Type, Plan and Upper Bolt Details, Unbalanced Butterfly Changeable Message Signs, Model 510~~

~~S123 Overhead Sign – Truss, Single Post Type, Frame Juncture Details, Unbalanced Butterfly Changeable Message Signs, Model 510~~

~~S124 Overhead Sign – Truss, Single Post Type, Layout, Balanced Butterfly Changeable Message Signs, Model 510~~

~~S125 Overhead Sign – Truss, Single Post Type, Structural Frame Details, Balanced Butterfly Changeable Message Signs, Model 510~~

~~S126 Overhead Sign – Truss, Single Post Type, Plan and Upper Bolt Details,~~

~~Balanced Butterfly Changeable Message Signs, Model 510~~

~~S127 Overhead Sign – Truss, Single Post Type, Frame Juncture Details, Balanced Butterfly Changeable Message Signs, Model 510~~

~~S128 Overhead Sign – Truss, Single Post Type, Layout, Full Cantilever Changeable Message Signs, Model 510~~

~~S129 Overhead Sign – Truss, Single Post Type, Structural Frame Details, Full Cantilever Changeable Message Signs, Model 510~~

~~S130 Overhead Sign – Truss, Single Post Type, Plan and Upper Bolt Details, Full Cantilever Changeable Message Signs, Model 510~~

~~S131 Overhead Sign – Truss, Single Post Type, Frame Juncture Details, Full Cantilever Changeable Message Signs, Model 510~~

~~S132 Overhead Sign – Truss, Single Post Type, Mounting Details, Changeable Message Signs, Model 510~~

~~S133 Overhead Sign – Truss, Single Post Type, Walkway Details, Changeable Message Signs, Model 510~~

~~S134 Overhead Sign – Truss, Single Post Type, Anchorage and Base Plate Details, Changeable Message Signs, Model 510~~

~~S135 Overhead Sign – Truss, Single Post Type, Foundation and Miscellaneous Details, Changeable Message Signs, Model 510~~

~~OVERHEAD SIGN – CHANGEABLE MESSAGE SIGN (MODEL 500 AND 510) WALKWAY SAFETY RAILING AND GUSSET PLATE DETAILS~~

~~S140 Overhead Sign – Truss, Single Post Type, Walkway Safety Railing Details, Changeable Message Signs, Model 500 and 510~~

~~S141 Overhead Sign – Truss, Single Post Type, Safety Cable Anchorage Details, Changeable Message Signs, Model 500 and 510~~

~~S142 Overhead Sign – Truss, Single Post Type, Gusset Plate Details, Changeable Message Signs, Model 500 and 510~~

~~ELECTRICAL SYSTEMS – SYMBOLS AND ABBREVIATIONS~~

~~RSP ES-1A Electrical Systems (Symbols and Abbreviations)~~

~~RSP ES-1B Electrical Systems (Symbols and Abbreviations)~~

~~RSP ES-1C Electrical Systems (Symbols and Abbreviations)~~

~~ELECTRICAL SYSTEMS – SERVICE EQUIPMENT AND WIRING DIAGRAMS~~

~~ES-2A Electrical Systems (Service Equipment)~~

~~RSP ES-2B Electrical Systems (Service Equipment, Type II Series)~~

~~RSP ES-2C Electrical Systems (Service Equipment Notes, Type III Series)~~

~~RSP ES-2D Electrical Systems (Service Equipment and Typical Wiring Diagram, Type III – A Series)~~

~~RSP ES-2E Electrical Systems (Service Equipment and Typical Wiring Diagram, Type III – B Series)~~

~~RSP ES-2F Electrical Systems (Service Equipment and Typical Wiring Diagram Type III – C Series)~~

~~RSP ES-2G Electrical Systems (Service Equipment and Typical Wiring Diagram~~

	Type III – D Series)
	ELECTRICAL SYSTEMS – CONTROLLER CABINETS
ES-3A	Electrical Systems (Controller Cabinet Details)
ES-3B	Electrical Systems (Controller Cabinet Details)
ES-3C	Electrical Systems (Controller Cabinet Details)
	ELECTRICAL SYSTEMS – TELEPHONE DEMARCATION CABINETS
ES-3D	Electrical Systems (Telephone Demarcation Cabinet, Type A)
RSP ES-3E	Electrical Systems (Telephone Demarcation Cabinet, Type B)
RSP ES-3F	Electrical Systems (Telephone Demarcation Cabinet, Type C)
ES-3G	Electrical Systems (Telephone Demarcation Cabinet, Type C Details)
	ELECTRICAL SYSTEMS – IRRIGATION CONTROLLER ENCLOSURE CABINET
ES-3H	Electrical Systems (Electric Service Irrigation)
	ELECTRICAL SYSTEMS – SIGNAL HEADS, SIGNAL FACES AND MOUNTINGS
ES-4A	Electrical Systems (Signal Heads and Mountings)
ES-4B	Electrical Systems (Signal Heads and Mountings)
RSP ES-4C	Electrical Systems (Signal Heads and Mountings)
RSP ES-4D	Electrical Systems (Signal Heads and Mountings)
ES-4E	Electrical Systems (Signal Faces and Mountings)
	ELECTRICAL SYSTEMS – DETECTORS
RSP ES-5A	Electrical Systems (Detectors)
ES-5B	Electrical Systems (Detectors)
ES-5C	Electrical Systems (Detectors)
ES-5D	Electrical Systems (Detectors)
	ELECTRICAL SYSTEMS – LIGHTING STANDARDS
RSP ES-6A	Electrical Systems (Lighting Standard, Types 15 and 21)
ES-6B	Electrical Systems (Lighting Standard, Types 15 and 21, Barrier Rail Mounted Details)
ES-6D	Electrical Systems (Lighting Standard, Types 15D and 21D, Double Arm)
RSP ES-6E	Electrical Systems (Lighting Standard, Types 30 and 31)
ES-6F	Electrical Systems (Lighting Standard, Types 30 and 31, Slip Base Plate Details)
ES-6G	Electrical Systems (Lighting Standard, Type 32)
ES-6H	Electrical Systems (Lighting Standard, Types 35 and 36-20A, 10 Degree Type)
ES-6I	Electrical Systems (Lighting Standard, Types 35 and 36-20A, 10 Degree Type Details)
ES-6J	Electrical Systems (Lighting Standard – 80' to 160', High Mast Light Pole Foundation Details)
ES-6K	Electrical Systems (Lighting Standard, Types 5 and 10 Overhead Sign Mounted)

~~ELECTRICAL SYSTEMS – SIGNAL AND LIGHTING STANDARD, PUSH BUTTON POSTS AND TYPE 15TS STANDARD~~

~~ES-7A~~ ~~Electrical Systems (Signal and Lighting Standards, Push Button Posts and Type 15TS Standard)~~

~~ELECTRICAL SYSTEMS – SIGNAL AND LIGHTING STANDARDS~~

~~RSP ES-7B~~ ~~Electrical Systems (Signal and Lighting Standard – Type 1 Standards and Equipment Numbering)~~

~~RSP ES-7C~~ ~~Electrical Systems (Signal and Lighting Standard – Case 1 Arm Loading, Wind Velocity = 100 mph, Arm Lengths 15' to 30')~~

~~RSP ES-7D~~ ~~Electrical Systems (Signal and Lighting Standard – Case 2 Arm Loading, Wind Velocity = 100 mph, Arm Lengths 15' to 30')~~

~~RSP ES-7E~~ ~~Electrical Systems (Signal and Lighting Standard – Case 3 Arm Loading, Wind Velocity = 100 mph, Arm Lengths 15' to 45')~~

~~RSP ES-7F~~ ~~Electrical Systems (Signal and Lighting Standard – Case 4 Arm Loading, Wind Velocity = 100 mph, Arm Lengths 25' to 45')~~

~~RSP ES-7G~~ ~~Electrical Systems (Signal And Lighting Standard – Case 5 Arm Loading, Wind Velocity = 100 mph, Arm Lengths 50' to 55')~~

~~ES-7H~~ ~~Electrical Systems (Signal and Lighting Standard – Case 5 Arm Loading, Wind Velocity = 100 mph, Arm Lengths 60' to 65')~~

~~ES-7I~~ ~~Electrical Systems (Signal and Sign Standard – Type 33, Left Turn)~~

~~ELECTRICAL SYSTEMS – FLASHING BEACONS~~

~~ES-7J~~ ~~Electrical Systems (Signal and Lighting Standard – Advance Flashing Beacons)~~

~~RSP ES-7K~~ ~~Electrical Systems (Signal and Lighting Standard – Cantilever Flashing Beacon, Types 9, 9A and 9B)~~

~~RSP ES-7L~~ ~~Electrical Systems (Signal and Lighting Standard – Cantilever Flashing Beacon, Types 9, 9A and 9B)~~

~~ELECTRICAL SYSTEMS – SIGNAL AND LIGHTING STANDARD DETAILS~~

~~ES-7M~~ ~~Electrical Systems (Signal and Lighting Standards – Details No. 1)~~

~~ES-7N~~ ~~Electrical Systems (Signal and Lighting Standards – Details No. 2)~~

~~ELECTRICAL SYSTEMS – INTERNALLY ILLUMINATION STREET NAME SIGN~~

~~ES-70~~ ~~Electrical Systems (Sign Illumination – Internally Illumination Street Name Sign)~~

~~ELECTRICAL SYSTEMS – PEDESTRIAN BARRICADES~~

~~ES-7P~~ ~~Electrical Systems (Pedestrian Barricades)~~

~~ELECTRICAL SYSTEMS – PULL BOX DETAILS~~

~~ES-8~~ ~~Electrical Systems (Pull Box Details)~~

~~ELECTRICAL SYSTEMS – ELECTRICAL DETAILS, STRUCTURE INSTALLATIONS~~

~~RSP ES-9A~~ ~~Electrical Systems (Electrical Details, Structure Installations)~~

~~ES-9B~~ ~~Electrical Systems (Electrical Details, Structure Installations)~~

~~RSP ES-9C~~ ~~Electrical Systems (Electrical Details, Structure Installations)~~

~~ES-9D~~ ~~Electrical Systems (Electrical Details, Structure Installations)~~

~~ES-9E~~	~~Electrical Systems (Electrical Details, Structure Installations)~~
~~ES-9F~~	~~Electrical Systems (Flush Soffit Luminaire Modification Details, Structure Installations)~~
	~~ELECTRICAL SYSTEMS – ISOFOOTCANDLE DIAGRAMS AND FOUNDATION DETAILS~~
~~ES-10~~	~~Electrical Systems (Isofootcandle Diagrams)~~
~~ES-11~~	~~Electrical Systems (Foundation Installations)~~
	~~ELECTRICAL SYSTEMS – PEDESTRIAN OVERHEAD LIGHTING~~
~~ES-12A~~	~~Electrical Systems (Pedestrian Overcrossing Fluorescent Lighting Fixture)~~
~~ES-12B~~	~~Electrical Systems (Pedestrian Undercrossing Fluorescent Lighting Fixture)~~
	~~ELECTRICAL SYSTEMS – SPLICING, WIRING DETAILS AND FUSE RATINGS~~
~~ES-13A~~	~~Electrical Systems (Splicing Details)~~
~~ES-13B~~	~~Electrical Systems (Wiring Details and Fuse Ratings)~~
	~~ELECTRICAL SYSTEMS – EXTINGUISHABLE MESSAGE SIGN~~
~~RSP ES-14A~~	~~Electrical Systems (LED Extinguishable Message Sign, 10" Letters)~~
~~RSP ES-14B~~	~~Electrical Systems (LED Extinguishable Message Sign Wiring Diagram)~~
~~RSP ES-14C~~	~~Electrical Systems (Extinguishable Message Sign and Flashing Beacons)~~
	~~ELECTRICAL SYSTEMS – SIGN ILLUMINATION EQUIPMENT AND CONTROLS~~
~~ES-15A~~	~~Electrical Systems (Sign Illumination Equipment)~~
~~ES-15B~~	~~Electrical Systems (36" Fluorescent Sign Illumination Equipment)~~
~~ES-15C~~	~~Electrical Systems (Sign Illumination Equipment)~~
~~RSP ES-15D~~	~~Electrical Systems (Lighting and Sign Illumination Control)~~
	~~ELECTRICAL SYSTEMS – CLOSED CIRCUIT TELEVISION POLE AND FOUNDATION DETAILS~~
~~ES-16A~~	~~Electrical Systems (Closed Circuit Television, Pole Details)~~
~~ES-16B~~	~~Electrical Systems (Close Circuit Television, Pole Details – Overhead Sign Mounted)~~
~~ES-16C~~	~~Electrical Systems (Closed Circuit Television – 60' to 90' High Mast Pole Details)~~